Jeoloji Panorama

Hazırlayanlar : ***Engin Öncü Sümer*** [1] , ***Mine Sümer*** [1] ***ve Sefer Örçen*** [2]

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Dünya Periyodiklerinden Yeni Makaleler

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Haziran 1996, cilt 85, no.2

Yiğitbaş, E., Yılmaz., Y., 1996, *New evidence and solution to the Maden complex controversy of the southeast Anatolia orogenic belt (Turkey)*: Geologische Rundschau 85, 2, 250-263.

Sofferl, H.C., Davoudzadeh, M., Rolf, C., Schmidt, S., 1996, *New paleo-magmatic data from Central Iran and Triassic paleorecon struction*: Geologische Rundschau 85, 2, 293-302.

De Wever, P., Baudin, F., 1996, *Paleogeography of radiolarite and orogenic-rich deposits in Mesozoic Tethys*: Geologische Rundschau 85, 2, 310-326.

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Parlalı, O., Delaloye, M., Bingöl, M., 1996, *Mineral Chemistry of Ultramafic and Mafic cumulated as an indicator of the arc-related origin of the Mersin ophiolite (Southern Turkey)*: Geologische Rundschau, 85, 4, 647-661.

Görür, N., Okay, A.I., 1996, *A fore-arc origin for the Thrace Basin, NW Turkey*: Geologische Rundschau, 85, 4, 662-668.

Çiner, A., Dleynoux, M., Koşun, E., 1996, *Cyclicity in the Middle Eocene Yamak turbidite coplex of the Haymana basin, Central Anatolia, Turkey*: Geologische Rundschau, 85, 4, 669-682.

"Geological Magazine" Temmuz 1995, cilt 132, no.4

Hamdi, B., Rozanov, A.Yu and Zhuravlev, A. Yu., 1995, *Latest Middle Cambrian metazoan reef rfom north Iran*: Geological Magazine, 132, 4, 367-373.

Segev, A., Idalicz, L., Steintz, G. and Long, B., 1995, *Post-depositional processes on a buried Cambrian sequence in southern Israel, North Arabian Massif: evidence from new K-Ar dating of Mn-nodules*: Geological Magazine, 132, 4, 375-385.

Görür, N., Şengör, A.M.C., Sakınç. M., Tüysüz, O., Akkök, R., Yiğitbaş, E., Ersoy, Ş., Algan, O., Güneysu, C. and Aykol, A., 1995, *Rift formation in the Gökova region, southwest Anatolia: Implication for the opening of the Agean Sea*: Geological Magazine, 132, 4, 673-650.

"Geological Magazine" Mart 1996, cilt 133, no.2

Danelian, T., Robertson, A.H.F. and Dimitriandis, S., 1996, *Age and significance of radiolaria sediments within basic exrussives of the marginal basin Guevgueli Ophiolite (Northern Greece)*: Geological Magazine, 133, 2, 127-136.

Dastanpour, M., 1996, *The Devonian System in Iran: A review*: Geological Magazine, 133, 2, 159-170.

"Geological Magazine" Mayıs 1996, cilt 133, no.3

Katzir, Y., Matthews, A., Garfunhel, Z., Schliested, M. and Avigad, D., 1996, *The tectono-metamorphic evolution of dismembered ophiolite (Tinos, Cyelades, Greece):* Geological Magazine, 133, 3, 237-254.

Richardson-Bunbury, J.M., *The Kula Volcanic field, western Turkey: the development of a Holocene alcali bazalt province and the adjacent normal-faulting graben*: Geological Magazine, 133, 3, 275-283.

Wagreich, M., Paulopolas, A., Faupl, P. and Migiros, G., 1996, *Age and sigmificance of Upper Cretaceous siliciclastic turbidites in the central Pihdos Mountains, Greece,* Geological Magazine, 133, 3, 325-331.

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Hetzel, R. and Reischmann, T., 1996, Intrusion age of Pan-African augen gneiss in the southern Menderes Massif and the age of cooling after Alpine ductile extensional metamorphism, Geological Magazine, 133, 4, 565-572.

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Mukhin, P., 1996, *The metamorphosed olistostromes and turbidites of Andres Island, Greece and their tectonic significance:* Geological Magazine, 133, 6, 697-711.

Dünya Periyodiklerinden CD-Tarama GEO-REF (1983-1993)

Hazırlayanlar : ***Engin Öncü Sümer ve Mine Sümer***

"Jeoloji Panorama" da bu ve bundan sonraki sayılarda dünya jeoloji periyodiklerinde belirli konularda yayınlanmış bazı makalelerin bibliyografyası "Jeoloji Mühendisliği" okurlarına sunulacaktır.
Bu amaçla, Orta Doğu Teknik Üniversitesi Kütüphanesinde CD-yayın tarama bölümünde bulunan ***GEO-REF 1983-1993*** *CD-diski ve* ***Earth Science*** *CD-disklerinde yer alan çeşitli konulara yönelik anahtar sözcüklerle jeoloji ile ilgili referans taraması yapılmıştır. İlerideki sayılarda da farklı konu ve başlıklar altında yayın taraması sürdürülecektir. Bu bölümle ilgili istek, görüş ve önerilerinizi bekler, bu çalışmanın araştırmalarınıza katkıda bulunmasını dileriz.*

Bölgesel Metamorfik Kayaçlarda Ortaya Çıkan Bazı Mineral ve Mineral Toplulukları : *klorit, muskovit, kloritoyid, biyotit, stavrolit, kordiyorit, andaluzit, sillimanit, disten*

Kısaltmalar
TI = ***başlık***
AU = ***Yazar(lar)***
OS = ***Yazarların adresleri***
SO = ***Yayınlandığı yer, cilt, sayfa***
AB = ***Yayının özeti***
YR = ***Yayınlandığı yıl***
LA = ***Yayının yazıldığı dil***
DE = ***Yayının anahtar sözcükleri***

TI: A petrogenetic grid for the KFMASH system.
AU: Dickenson-M-P; Hess-P-C
OS: Brown Univ., Dep. Geol. Sci., Providence, RI, United-States
SO: Eos,-Transactions,-American-Geophysical-Union. 62. (17). p. 421 YR: 1981 LA: English
DE: data-processing; petrology-; phase-equilibria; silicates-; FeO-Al2-O3-SiO2-H2-O; KFMASH-; graphic-display; shale-; clastic-rocks; chemography-; topology-;aluminosilicates-; garnet-group; nesosilicates-; orthosilicates-; staurolite-; chloritoid-; biotite-; mica-group; sheet-silicates; chlorite-; chlorite-group; cordierite-; ring-silicates

TI: Uni- and divariant equilibria between staurolite, chloritoid, garnet, chlorite, biotite and medium pressure meta-acidites from Lorient-Concarneau area (South Brittany, France).
AU: Triboulet-C
OS: Univ. P. M. Curie, lab. petrol., Paris Cedex 75230, France
SO: Contributions-to-Mineralogy-and-Petrology. 82. (2-3). p. 195-204.YR: 1983
DE: France-; petrology-; metamorphic-rocks; mineral-assemblages; phase-equilibria; metamorphism-; P-T-conditions; high-temperature; staurolite-; nesosilicates-; orthosilicates-; silicates-; chloritoid-; garnet-group; chlorite-group; sheet-silicates; biotite-; mica-group; phengite-; geologic-thermometry; correlation-; high-pressure; Silurian-; Devonian-; Morbihan-; Finistere-; Western-Europe; Europe-; Lorient-Concarneau

TI: Local and regional differences in the chemical potential of water in amphibolite grade pelitic rocks.
AU: Dickenson-M-P
OS: Harvard Univ., Dep. Geol. Sci., Cambridge, MA, United-States
SO: The Geological Society of America, 97th annual meeting. Abstracts-with-Programs-Geological-Society-of-America. 16. (6). p. 488 YR: 1984
DE: metamorphic-rocks; geochemistry-; water-of-crystallization; New-Hampshire; petrology-; Moosilauke-Quadrangle; New-England; Eastern-U.S.; United-States; pelitic-texture; amphibolite-facies; garnet-group; nesosilicates-; orthosilicates-; silicates-; Gibbs-technique; chloritoid-; biotite-; mica-group; sheet-silicates; chlorite-; chlorite-group; staurolite-; andalusite-; iron-; magnesium-; phase-equilibria; chemical-analysis

TI: ***Garnet and associated minerals in the southern margin of the Menderes Massif, Southwest Turkey.***
AU: Ashworth-J-R; Evirgen-M-M
OS: Univ. Aston, Dep. Geol. Sci., Aston, United-Kingdom; Hacettepe Univ., Turkey
SO: Geological-Magazine. 121. (4). p. 323-337. YR: 1984
AB: Assemblages with muscovite+quartz show a regular increase in grade from the Chlorite Zone at the base of the Lycian Nappe Complex to the Garnet Zone within the structurally underlying Menderes Massif. Biotite enters before garnet, which precedes oligoclase. Garnet-bearing assemblages in pelites are compared with those in re-equilibrated quartzofeldspathic gneisses, where garnet is unusually calcic (in one case approaching Gross50 Alm50). Garnet zoning, with Mn decreasing outwards, is interpreted as growth zoning; Ca decreases outwards in pelite garnets but shows the reverse effect in the gneisses. Chloritoid is common but rarely coexists with biotite, and garnet+chlorite+paragonite is found rather than chloritoid+albite. Garnet-biotite geothermometry, corrected for the effect of Ca in garnets with up to 29 mole% grossular, indicates temperatures of 530+ or -50 degrees C near the garnet isograd. Muscovite-paragonite geothermometry gives an anomalous result. Metamorphic pressure is considered in the light of (i) Mn/Fe partition between garnet and biotite, (ii) Ca content of garnet coexisting with plagioclase+muscovite+biotite, (iii) Na in actinolite coexisting with albite+chlorite+magnetite, and (iv) celadonite content of muscovite which, however, shows variation due to disequilibrium within a specimen and does not provide an accurate geobarometer. Comparisons with published studies indicate a strong similarity to the Barrovian Dalradian of Scotland and lead to a tentative pressure estimate of approximately 5 kbar.--Modified journal abstract.
DE: Turkey-; petrology-; metamorphic-rocks; metamorphism-; P-T-conditions; isograds-; gneisses-; Middle-East; Asia-; garnet-group; nesosilicates-; orthosilicates-; silicates-; mineral-assemblages; southwestern-Turkey; Menderes-Massif; grade-; chlorite-zone; Lycian-Nappe-complex; biotite-; mica-group; sheet-silicates; oligoclase-; plagioclase-; feldspar-group; framework-silicates; shale-; clastic-rocks; quartzofeldspathic-gneisses; zoning-; retrograde-metamorphism; geologic-thermometry; complexes-; chloritoid-; chlorite-; chlorite-group; paragonite-; muscovite-; celadonite-; pressure-; composition-

TI: Uebersicht ueber Geologie und Mineralgehalt in einem Querprofil von Altkristallin zur Kalkalpenbasis (Triebenauer Tauernpass - Flitzenschlucht, Paltental, Steiermark, Oesterreich). Translated title: Geology and mineral composition in a cross-section of the old crystalline Limestone Alps base; Triebenau Tauernpass, Flitzenschlucht, Paltental, Styria, Austria.
AU: Ratschbacher-L; Klima-K
SO: Jahrbuch-der-Geologischen-Bundesanstalt-Wien. 128. (1). p. 151-173. YR: 1985 LA: German LS: English
DE: Austria-; petrology-; metamorphic-rocks; composition-; mineral-composition; absolute-age; dates-; Ordovician-; Silurian-; Alpine-Orogeny; graywacke-; clastic-rocks; chloritoid-; nesosilicates-; orthosilicates-; silicates-; biotite-; mica-group; sheet-silicates; garnet-; Permian-; Triassic-; metamorphism-; North-Austrian-Alps; Alps-; Central-Austrian-Alps; Styria-; Central-Europe; Europe-; K/Ar-

TI: Reversals in Fe-Mg partitioning between chloritoid and staurolite.
AU: Grambling-J-A
OS: Univ. N.M., Dep. Geol., Albuquerque, NM, United-States
SO: American-Mineralogist. 68. (3-4). p. 373-388. YR: 1983
AB: Chloritoid and staurolite coexist with Al silicate, chlorite, or garnet + or - biotite in Precambrian quartzite and schist from northern New Mexico. The observed Fe-Mg reversal is not related to variable P, T, or minor element content, including Fe(3+). However, it could arise from any of three factors: (1) Fe and Mg may occur on several crystallographic sites in one or both minerals; (2) some Mg may not be exchangeable with Fe in staurolite; or (3) Fe and Mg may mix non-ideally in one or both phases.--Modified journal abstract.
DE: New-Mexico; petrology-; metamorphic-rocks; mineral-assemblages; phase-equilibria; minerals-; partitioning-; nesosilicates-; chloritoid-; crystal-chemistry; iron-; geochemistry-; magnesium-; Rio-Arriba-County; Mora-County; Southwestern-U.S.; United-States; Sangre-de-Cristo-Mountains; Truchas-Range; coexisting-minerals; orthosilicates-; silicates-; staurolite-; quartzites-; schists-; textures-; reversals-; aluminosilicates-; electron-probe-data; Precambrian-

TI: Allochemical retrograde metamorphism in shear zones; an example in metapelites, Virginia, USA.
AU: Gates-A-E; Speer-J-A
SO: Journal-of-Metamorphic-Geology. 9. (5). p. 581-604. YR: 1991
DE: metamorphic-rocks; metasedimentary-rocks; metapelite-; Virginia-; petrology-; mineral-deposits;

genesis-; processes-; syngenesis-; minerals-; sheet-silicates; chlorite-group; occurrence-; nesosilicates-; chloritoid-; staurolite-; metamorphism-; retrograde-metamorphism; shear-zones; Southeastern-U.S.; Eastern-U.S.; United-States; diagenesis-; mineral-deposits,-genesis; orthosilicates-; silicates-; chlorite-; sheet-silicates,-chlorite-group; chemical-composition

TI: Les facies a carpholite-chloritoide dans la couverture Brianconnaise des Alpes Ligures: un temoin de l'histoire tectono-metamorphique regionale.
Translated title: Carpholite-chloritoid facies in the Brianconnais cover of the Ligurian Alps; evidence of regional tectonometamorphic history.
AU: Goffe-B
SO: Memorie-della-Societa-Geologica-Italiana. 28. p. 461-479. YR: 1984 LA: French LS: English
DE: Italy-; structural-geology; tectonics-; metamorphic-rocks; metasedimentary-rocks; paragenesis-; Ligurian-Alps; Maritime-Alps; carpholite-; chain-silicates; silicates-; chloritoid-; nesosilicates-; orthosilicates-; greenschist-facies; major-elements; electron-probe-data; Alpine-Orogeny; structural-analysis; Liguria-; orogeny-; Southern-Europe; Europe-; Brianconnais-Zone

TI: Rock pressures vs. fluid pressure as a controlling influence on mineral stability; an example from New Mexico.
AU: Holdaway-M-J; Goodge-J-W
SO: American-Mineralogist. 75. (9-10). p. 1043-1058. YR: 1990 LA: English
DE: New-Mexico; petrology-; metamorphism-; P-T-conditions; pressure-; metamorphic-rocks; mineral-assemblages; phase-equilibria; metasedimentary-rocks; stability-; minerals-; silicates-; Taos-County-New-Mexico; Ortega-Group; Rinconada-Formation; Southwestern-U.S.; United-States; north-central-New-Mexico; Picuris-Range; fluid-pressure; quartzites-; schists-; solid-phase; Proterozoic-; upper-Precambrian; Precambrian-; kyanite-; nesosilicates-; orthosilicates-; sillimanite-; andalusite-; chloritoid-; staurolite-; geologic-barometry

TI: A petrogenetic grid for metamorphosed aluminous Witwatersrand shales.
AU: Wallmach-T; Meyer-F-M
OS: South-African-Journal-of-Geology. 93. (1). p. 93-102. YR: 1990 LA: English
DE: South-Africa; petrology-; metamorphism-; P-T-conditions; interpretation-; phase-equilibria; metasedimentary-rocks; Witwatersrand-System; shale-; clastic-rocks; mineral-assemblages; Jeppestown-Shales; Southern-Africa; Africa-; chloritoid-; nesosilicates-; orthosilicates-; silicates-; migration-of-elements; pyrophyllite-; sheet-silicates; genesis-

TI: Les metapelites a phengite-chloritoide-grenat-staurotide-disthene de la klippe de Najac-Carmaux; nouveaux marqueurs d'un metamorphisme de haute pression varisque en Rouergue occidental.
Translated title: Phengite-chloritoid-garnet-staurolite-kyanite bearing metapelites of the Najac-Carmaux klippe; new evidence for Variscan high-pressure metamorphism in western Rouergue.
AU: Delor-C; Burg-J-P; Guiraud-M; Leyreloup-A
SO: Sciences-de-la-Terre. 305. (7). p. 589-595 YR: 1987 LA: French LS: English
DE: France-; petrology-; metamorphism-; P-T-conditions; high-pressure; metamorphic-rocks; metasedimentary-rocks; metapelite-; phengite-; mica-group; sheet-silicates; silicates-; chloritoid-; nesosilicates-; orthosilicates-; garnet-group; staurolite-; kyanite-; Caledonian-Orogeny; Rouergue-; Aveyron-; Tarn-; Western-Europe; Europe-; Central-Massif; Najac-Carmaux

TI: Chloritoid-paragonite-phyrophyllite and stilpnomelane-bearing rocks near Blackwater Mountain, western Rocky Mountains, British Columbia.
AU: Ghent-Edward-D; Stout-Mavis-Z; Ferri-Filippo
SO: The-Canadian-Mineralogist. 27. (1). p. 59-66. YR: 1989
DE: British-Columbia; petrology-; metamorphic-rocks; metasedimentary-rocks; mineral-assemblages; metamorphism-; P-T-conditions; interpretation-; Western-Canada; Canada-; chloritoid-; nesosilicates-; orthosilicates-; silicates-; paragonite-; mica-group; sheet-silicates; pyrophyllite-; stilpnomelane-; Blackwater-Mountain; Canadian-Rocky-Mountains; Middle-Cambrian; Cambrian-; Chancellor-Formation; petrography-; X-ray-diffraction-spectra

TI: Sudoite, a rock-forming mineral in Verrucano of the Northern Apennines (Italy) and the sudoite-chloritoid-pyrophyllite assemblage in prograde metamorphism.
AU: Franceschelli-M; Mellini-M; Memmi-I; Ricci-C-A
SO: Contributions-to-Mineralogy-and-Petrology. 101. (3). p. 274-279. YR: 1989
DE: minerals-; sheet-silicates; chlorite-group; sudoite-; metamorphism-; prograde-metamorphism; mineral-assemblages; Italy-; petrology-; sheet-silicates,-chlorite-

group; silicates-; pyrophyllite-; chloritoid-; nesosilicates-; orthosilicates-; muscovite-; mica-group; paragonite-; chemical-composition; Tuscany-; Emilia-Romagna; Apennines-; Southern-Europe; Europe-; Verrucano-

TI: Transmission electron microscopy of chloritoid; intergrowth with sheet silicates and reactions in metapelites.
AU: Banfield-Jillian-F; Karabinos-Paul; Veblen-David-R
SO: American-Mineralogist. 74. (5-6). p. 549-564.
YR: 1989
DE: Vermont-; petrology-; metamorphic-rocks; minerals-; nesosilicates-; chloritoid-; crystal-growth; metasedimentary-rocks; metapelite-; Rutland-County-Vermont; Windham-County-Vermont; TEM-data; intergrowths-; orthosilicates-; silicates-; sheet-silicates; ultrastructure-; natural-materials; Green-Mountains; Taconic-Allochthon; Jamaica-Vermont; Rutland-Vermont; New-England; Eastern-U.S.; United-States; southern-Vermont

TI: Chloritoid, staurolite and gedrite of the high-alumina hornfelses of the Karatash Pluton.
AU: Likhanov-I-I
SO: International-Geology-Review. 30. (8). p. 868-877.- YR: 1988
DE: metamorphic-rocks; hornfels-; mineral-composition; USSR-; petrology-; intrusions-; plutons-; aureoles-; chloritoid-; nesosilicates-; orthosilicates-; silicates-; gedrite-; orthoamphibole-; amphibole-group; chain-silicates; staurolite-; mineral-assemblages; Karatash-Pluton; P-T-conditions; Bateni-Ridge; Kuznetsk-Alatau; Russian-Republic; West-Siberia

TI: A chloritoid-bearing paragenesis in the Macduff Slates of central Buchan.
AU: Leslie-A-G
SO: Scottish-Journal-of-Geology. 24. (3). p. 223-232. YR: 1988 LA: English
DE: Scotland-; petrology-; metamorphic-rocks; slates-; P-T-conditions; structural-geology; tectonics-; paragenesis-; Great-Britain; United-Kingdom; Western-Europe; Europe-; chloritoid-; nesosilicates-; orthosilicates-; silicates-; chlorite-; chlorite-group; sheet-silicates; phengitic-muscovite; muscovite-; mica-group; quartz-; silica-minerals; framework-silicates; opaque-minerals; facies-; Macduff-Slate; Insch-; folds-; overprinting-; Aberdeenshire-; Dalradian-; Kincardineshire-; Buchan-

TI: Experimental study of carboirite and related phases in the system GeO2 -SiO2 -Al2 O3 -FeO-H2 O at P upto 2 kbar.
AU: Julliot-J-Y; Volfinger-M; Robert-J-L
SO: Mineralogy-and-Petrology. 36. (1). p. 51-69. YR: 1987 LA: English LS: French
DE: minerals-; oxides-; germanates-; crystal-chemistry; phase-equilibria; GeO2-SiO2-Al2-O3-FeO-H2-O; experimental-studies; brunogeierite-; synthesis-; stability-; X-ray-data; infrared-spectra; solid-solution; chloritoid-; nesosilicates-; orthosilicates-; silicates-; germanium-; metals-; silicon-; aluminum-; iron-; water-; geochemistry-; P-T-conditions; carboirite-

TI: The occurrence and chemical composition of chloritoid in the metamorphic rocks of the Coast plutonic-metamorphic complex near Juneau.
AU: Himmelberg-Glen-R; Ford-Arthur-B; Brew-David-A
SO: U.-S.-Geological-Survey-Circular. p. 99-102. YR: 1986
DE: southeastern-Alaska; Alaska-; petrology-; metamorphic-rocks; facies-; greenschist-facies; minerals-; nesosilicates-; chloritoid-; Western-U.S.; United-States; Atlin-Quadrangle; chemical-composition; orthosilicates-; silicates-; Coast-Complex; Coast-Mountains; formula-; Juneau-region; mineral-assemblages; regional-metamorphism; metamorphism-; USGS-

TI: Chloritoid from low-grade pelitic rocks in North Wales.
AU: Brearley-Adrian-J
SO: Mineralogical-Magazine. 52 (Part 3). (366). p. 394-396. YR: 1988
DE: Wales-; petrology-; metamorphic-rocks; slates-; mineral-assemblages; Rhyd-Ddu; Snowdonia-; Gwynedd-; northern-Wales; Great-Britain; United-Kingdom; Western-Europe; Europe-; Ordovician-; chloritoid-; nesosilicates-; orthosilicates-; silicates-; aluminosilicates-; low-grade-metamorphism; metamorphism-

TI: Widespread fluid infiltration during metamorphism of the Witwatersrand goldfields; generation of chloritoid and pyrophyllite.
AU: Phillips-G-N
SO: Journal-of-Metamorphic-Geology. 6. (3). p. 311-332. YR: 1988
DE: South-Africa; petrology-; metamorphism-; evolution-; mineral-assemblages; Southern-Africa; Africa-; Witwatersrand-; genesis-; Archean-; Precambrian-; chloritoid-; nesosilicates-; orthosilicates-; silicates-; pyrophyllite-; sheet-silicates

TI: Garnet-chloritoid equilibria in eclogitic pelitic rocks from the Sesia Zone (Western Alps); their bearing on phase relations in high pressure metapelites.
AU: Vuichard-J-P; Ballevre-M
SO: Journal-of-Metamorphic-Geology. 6. (2). p. 135-157. YR: 1988
DE: Alps-; petrology-; metamorphic-rocks; metasedimentary-rocks; metapelite-; Europe-; Western-Alps; Sesia-; phase-equilibria; minerals-; P-T-conditions

TI: Cr-rich Mg-chloritoid, a first record in high-pressure metagabbros from Monviso (Cottian Alps), Italy.
AU: Kienast-J-R; Messiga-B
SO: Mineralogical-Magazine. 51 (Part 5). p. 681-687. YR: 1987
DE: Italy-; mineralogy-; nesosilicates-; minerals-; chloritoid-; Southern-Europe; Europe-; Cottian-Alps; Monviso-; metagabbro-; metaigneous-rocks; high-pressure; orthosilicates-; silicates-; metatroctolite-; chromium-; magnesium-

TI: Chloritoid-hornblende assemblages in quartz-muscovite pelitic rocks of the Central Metasedimentary Belt, Grenville Province, Canada.
AU: Thompson-P-H; Leclair-A-D
SO: Journal-of-Metamorphic-Geology. 5. (3). p. 415-436. YR: 1987
DE: Canadian-Shield; petrology-; metamorphic-rocks; schists-; mineral-assemblages; phase-equilibria; metamorphism-; P-T-conditions; Grenville-Province; North-America; pelitic-texture; Central-Metasedimentary-Belt; chloritoid-; nesosilicates-; orthosilicates-; silicates-; quartz-; silica-minerals; framework-silicates; muscovite-; mica-group; sheet-silicates; hornblende-; clinoamphibole-; amphibole-group; chain-silicates; petrography-; Flinton-Group; Grenville-Supergroup

TI: Metamorphism of the Witwatersrand gold fields; conditions during peak metamorphism.
AU: Phillips-G-Neil
SO: Journal-of-Metamorphic-Geology. 5. (3). p. 307-322. YR: 1987
DE: South-Africa; economic-geology; gold-ores; mineral-deposits; genesis-; metamorphic-processes; Southern-Africa; Africa-; Transvaal-; Witwatersrand-; metal-ores; metamorphism-; greenschist-facies; metapelite-; metasedimentary-rocks; regional-metamorphism; chloritoid-; nesosilicates-; orthosilicates-; silicates-; pyrophyllite-; sheet-silicates; mineral-deposits,-genesis; Jeppestown-Shale; Booysens-Shale; Precambrian-; P-T-conditions

TI: Chloritoids; dependence of the optical properties upon chemical variation and polytypic intergrowth.
AU: Cooper-Brian-J
OS: Sam Houston State Univ., Geol. Prog., Huntsville, TX, United-States
SO: Abstracts-with-Programs-Geological-Society-of-America. 18. (6). p. 571 YR: 1986
DE: chloritoid-; nesosilicates-; orthosilicates-; silicates-; optical-properties; polytypism-; intergrowths-

TI: The tectonic implications of high-pressure metamorphism in the western Alps.
AU: Fry-N; Barnicoat-A-C
SO: Journal-of-the-Geological-Society-of-London. 144. (4). p. 653-659. YR: 1987
DE: Alps-; petrology-; metamorphism-; P-T-conditions; high-pressure; Europe-; Western-Alps; tectonics-; kyanite-; nesosilicates-; orthosilicates-; silicates-; chloritoid-; eclogite-; lawsonite-; sorosilicates-; ophiolite-; ultramafics-

TI: Chloritoid-bearing rocks associated with blueschists and eclogites, northern New Caledonia.
AU: Ghent-Edward-D; Stout-Mavis-Z; Black-P-M; Brothers-R-N
SO: Journal-of-Metamorphic-Geology. 5. (2). p. 239-254. YR: 1987
DE: New-Caledonia; petrology-; metamorphic-rocks; facies-; blueschist-facies; metamorphism-; P-T-conditions; indicators-; northern-New-Caledonia; Melanesia-; eclogite-; mineral-assemblages; chloritoid-; nesosilicates-; orthosilicates-; silicates-; metasedimentary-rocks; Tertiary-; glaucophane-; clinoamphibole-; amphibole-group; chain-silicates; phase-equilibria; geologic-thermometry; geologic-barometry; garnet-group

TI: Evidence for a Variscan suture zone in the Vendee, France; a petrological study of blueschist facies rocks from Bois de Cene.
AU: Guiraud-M; Burg-J-P; Powell-R
SO: Journal-of-Metamorphic-Geology. 5. (2). p. 225-237. YR: 1987
DE: France-; tectonophysics-; plate-tectonics; metamorphic-rocks; facies-; blueschist-facies; metamorphism-; retrograde-metamorphism; high-pressure; Vendee-; Western-Europe; Europe-; Bois-de-

Cene; suture-zones; glaucophane-; clinoamphibole-; amphibole-group; chain-silicates; silicates-; chloritoid-; nesosilicates-; orthosilicates-; schists-; mineral-assemblages; P-T-conditions

TI: Chloritoid-pyrophyllite-rectorite facies rocks from Brittany, France.
AU: Paradis-S; Velde-B; Nicot-E
SO: Contributions-to-Mineralogy-and-Petrology. 83. (3-4). p. 342-347. YR: 1983
DE: metamorphic-rocks; facies-; pseudomorphism-; France-; petrology-; pyrophyllite-; sheet-silicates; silicates-; chloritoid-; nesosilicates-; orthosilicates-; rectorite-; clay-minerals; Paleozoic-; low-temperature; black-shale; clastic-rocks; chlorite-group; stability-; electron-probe-data; shale-; Armorican-Massif; Finistere-; Brittany-; sedimentary-rocks; Western-Europe; Europe-

TI: Garnet and staurolite producing reactions in a chlorite-chloritoid schist.
AU: Karabinos-Paul
SO: Contributions-to-Mineralogy-and-Petrology. 90. (2-3). p. 262-275. YR: 1985
DE: Jamaica-; petrology-; metamorphism-; prograde-metamorphism; phase-equilibria; schists-; reactions-; metamorphic-rocks; chlorite-schist; garnet-; crystal-zoning; staurolite-; nesosilicates-; orthosilicates-; silicates-; textures-; chemical-composition; Greater-Antilles; West-Indies; chemical-reaction

TI: Chloritoid-sillimanite assemblage from North Carolina.
AU: Milton-Daniel-J
SO: American-Mineralogist. 71. (7-8). p. 891-894. YR: 1986
DE: North-Carolina; petrology-; metamorphic-rocks; mineral-assemblages; phase-equilibria; aluminosilicates-; stability-; minerals-; Mecklenburg-County; Southeastern-U.S.; Eastern-U.S.; United-States; Piedmont-; Charlotte-Belt; western-North-Carolina; chloritoid-; nesosilicates-; orthosilicates-; silicates-; sillimanite-; electron-probe-data; experimental-studies; quartzites-; P-T-conditions

TI: Condizioni termobariche dell'evento statico a cloritoide e staurolite in Aspromonte.
Translated title: Pressure-temperature conditions of the static event in chloritoid and staurolite in Aspromonte.
AU: Ioppolo-S; Pezzino-A; Puglisi-G
SO: Rendiconti-della-Societa-Geologica-Italiana. 6. (Suppl.). p. 3-4. YR: 1983
DE: Italy-; petrology-; metamorphic-rocks; mineral-assemblages; phase-equilibria; metamorphism-; P-T-conditions; mesozonal-metamorphism; paragenesis-; staurolite-; nesosilicates-; orthosilicates-; silicates-; chloritoid-; paragonite-; mica-group; sheet-silicates; electron-probe-data; Hercynian-Orogeny; Calabria-; Apennines-; Southern-Europe; Europe-; orogeny-; structural-geology; South-Apennines; Aspromonte-

TI: Margarite and chloritoid from staurolite-kyanite zone rocks of the Hoosac Formation, SE Vermont.
AU: Downie-E-A
SO: Abstracts-with-Programs-Geological-Society-of-America. 15. (3). p. 190 YR: 1983
DE: Vermont-; petrology-; metamorphic-rocks; schists-; composition-; metamorphism-; grade-; indicators-; inclusions-; mineral-inclusions; P-T-conditions; phase-equilibria; interpretation-; Hoosac-Formation; New-England; Eastern-U.S.; United-States; southeastern-Vermont; Chester-gneiss-dome; mineral-assemblages; chemical-composition; prograde-metamorphism; retrograde-metamorphism; textures-; alteration-; coexisting-minerals; reactions-; ion-exchange

TI: Il cloritoide nelle Alpi Apuane; un probabile indicatore della esistenza di un metamortismo pre-alpino.
Translated title: Chloritoid of Apuan Alps; probable indicater of existence of pre-alpine metamorphism.
AU: Rettignieri-M; Tucci-P
SO: Periodico-di-Mineralogia. 52. (1). p. 83-96.
YR: 1983 LA: ItalianLS: English
DE: Italy-; petrology-; metamorphic-rocks; schists-; chloritoid-; nesosilicates-; orthosilicates-; silicates-; major-elements; textures-; metamorphism-; kinematics-; Paleozoic-; Apuane-Alps; Tuscany-; Southern-Europe; Europe-

TI: Local and regional differences in the chemical potential of water in amphibolite grade pelitic rocks.
AU: Dickenson-M-P
SO: Abstracts-with-Programs-Geological-Society-of-America. 16. (6). p. 488 YR: 1984
DE: metamorphic-rocks; geochemistry-; water-of-crystallization; New-Hampshire; petrology-; Moosilauke-Quadrangle; New-England; Eastern-U.S.; United-States; pelitic-texture; amphibolite-facies; garnet-group; nesosilicates-; orthosilicates-; silicates-; Gibbs-technique; chloritoid-; biotite-; mica-group; sheet-silicates; chlorite-; chlorite-group; staurolite-; andalusite-; iron-; magnesium-; phase-equilibria; chemical-analysis

TI: Metamorphic transformations of an Al-Mg gabbro into a talc + kyanite + garnet + chloritoid + jadeite-bearing paragenesis, Val d'Aosta, Italy.
AU: Kienast-J
SO: Terra-Cognita. 2. (3). p. 307 YR: 1982
DE: Italy-; petrology-; metamorphic-rocks; facies-; eclogite-facies; Southern-Europe; Europe-; Valle-d'Aosta; genesis-; gabbro-; gabbros-; ultramafics-; high-pressure; P-T-conditions; pyroxene-group; chain-silicates; silicates-

TI: High resolution electron microscopy of chloritoid minerals from different geological milieu.
AU: Subbanna-G-N; Anantha-Iyer-G-V
SO: Proceedings-of-the-Indian-Academy-of-Sciences:-Chemical-Sciences. 91. (1). p. 47-56. YR: 1982
DE: India-; mineralogy-; sheet-silicates; chlorite-group; minerals-; electron-microscopy-data; sheet-silicates,-chlorite-group; Karnataka-; Indian-Peninsula; Asia-; Haute-resolution; Tumkur-; Hassan-

TI: Chloritoid and staurolite stability; implications for metamorphism in the Archaean Yilgarn Block, Western Australia.
AU: Bickle-M-J
SO: Journal-of-the-Geological-Society-of-London. 141. (6). p. 1075 YR: 1984
DE: Western-Australia; petrology-; metamorphism-; P-T-conditions; amphibolite-facies; Australia-; Australasia-; Yilgarn-Block; Archean-; Precambrian-; staurolite-; nesosilicates-; orthosilicates-; silicates-; chloritoid-; quartz-; silica-minerals; framework-silicates; almandine-; garnet-group; cordierite-; ring-silicates; andalusite-; mineral-assemblages; aureoles-; high-grade-metamorphism; low-grade-metamorphism

TI: Conditions of formation of garnet and staurolite in a chloritoid schist from VT.
AU: Karabinos-P
SO: Abstracts-with-Programs-Geological-Society-of-America. 15. (3). p. 140 YR: 1983 LA: English
DE: Vermont-; petrology-; metamorphic-rocks; mineral-assemblages; genesis-; metamorphism-; evolution-; effects-; phase-equilibria; P-T-conditions; Pinney-Hollow-Formation; New-England; Eastern-U.S.; United-States; Jamaica-; Greater-Antilles; West-Indies; Taconic-Orogeny; Acadian-Phase; prograde-metamorphism; retrograde-metamorphism; textures-; zoning-; reactions-; stability-

TI: Chloritoid and staurolite stability; implications for metamorphism in the Archaean Yilgarn Block, Western Australia.
AU: Bickle-M-J; Archibald-N-J
SO: Journal-of-Metamorphic-Geology. 2. (3). p. 179-203. YR: 1984 LA: English
DE: metamorphism-; P-T-conditions; regional-metamorphism; paragenesis-; processes-; Western-Australia; petrology-; metamorphic-rocks; chloritoid-; nesosilicates-; orthosilicates-; silicates-; staurolite-; crystal-chemistry; phase-equilibria; Archean-; Precambrian-; Yilgarn-Block; Australia-; Australasia-; geologic-thermometry; geologic-barometry; geothermal-gradient; Pioneer-Dome; Lake-Zot; Kalgoorlie-Norseman-Greenstone; interpretation-; amphibolite-facies; granite-greenstone-terranes; models-; mineral-assemblages

TI: A unique magnesiochloritoid-bearing, high-pressure assemblage from the Monte Rosa, Western Alps; petrologic and (40)Ar-(39)Ar radiometric study.
AU: Chopin-C; Monie-P
SO: Contributions-to-Mineralogy-and-Petrology. 87. (4). p. 388-398. YR: 1984 LA: English
DE: Alps-; petrology-; metamorphic-rocks; mineral-assemblages; absolute-age; dates-; Italy-; Switzerland-; Monte-Rosa; Western-Alps; Europe-; Ar/Ar-; phengite-; mica-group; sheet-silicates; silicates-; talc-; chloritoid-; nesosilicates-; orthosilicates-; kyanite-; quartz-; silica-minerals; framework-silicates; magnesium-; P-T-conditions; Southern-Europe; Central-Europe

TI: Electron microprobe analyses of rock-forming minerals from the Sanbagawa metamorphic rocks, Shikoku; Part III, Nakatsu-Nanokawa and Yanadani-Mikawa areas.
AU: Aiba-K; Higashino-T; Sakai-C; Banno-S
SO: Science-Reports-of-the-Kanazawa-University. 29. (1). p. 65-90. YR: 1984
DE: Japan-; petrology-; metamorphic-rocks; composition-; chemical-composition; Far-East; Asia-; Sanbagawa-; electron-probe-data; Nakatsu-Nanokawa; Yanadani-Mikawa; Chichibu-Belt; mafic-composition; chloritoid-; nesosilicates-; orthosilicates-; silicates-; metamorphism-; Shikoku-; actinolite-facies; prehnite-pumpellyite-facies; instruments-; petrography-; mineral-composition

TI: Moessbauer and infrared spectroscopic studies of Belgian chloritoids.

AU: DeGrave-E; Vanleeberghe-R; Verdonck-L; de-Geyter-G
OS: Rijksuniv. Gent, Ghent, Belgium
SO: Physics-and-Chemistry-of-Minerals. 11. (2). p. 85-94.YR: 1984
AB: Chloritoid samples from the Stavelot Massif and the Serpont Massif have been characterized by chemical analyses and differential X-ray diffraction. Moessbauer spectra at temperatures between 78 and 360 K and in external magnetic fields were obtained for a triclinic and for a monoclinic specimen. The spectra show a superposition of a weak Fe(3+) doublet (less than 10%) and an intense Fe(2+) doublet. A decomposition of the ferrous adsorption into two distinct quadrupole doublets leads to smaller deviations between experimental and calculated line shapes, especially at low temperatures. This suggests that Fe(2+) is present in both cis and trans O2 (OH)4 octahedral positions in the trioctahedral layer. Structural data derived from the temperature dependence of isomer shifts and quadrupole splittings, are found to be inconsistent with known crystallographic data. It is therefore concluded that Fe(2+) is present in only one type of lattice site and that the numerically imposed decomposition into two ferrous doublets is merely an artifact due to thickness saturation effects and to the distributive character of the hyperfine parameters. The negative sign of the electric field gradient further confirms the assignment of the Fe(2+) doublet to a cis octahedral configuration. Only minor differences exist between the Moessbauer results for the triclinic and monoclinic chloritoid. The infrared absorption spectra of the four samples are almost identical except in the region around 600 cm(-1) at which the monoclinic phase exhibits two absorption bands instead of one band for the triclinic samples. All absorption bands can be well assigned to the different vibrations. Inter-layer hydrogen bonding is evidenced by the occurrence of two vo-H absorption bands.--Modified journal abstract.
DE: crystal-structure; nesosilicates-; chloritoid-; crystal-chemistry; minerals-; Belgium-; mineralogy-; orthosilicates-; Western-Europe; Europe-; mossbauer-spectra; spectroscopy-; infrared-spectroscopy; Stavelot-Massif; Serpont-Massif; X-ray-data; chemical-composition; silicates-; lattice-

TI: Garnet and associated minerals in the southern margin of the Menderes Massif, Southwest Turkey.
AU: Ashworth-J-R; Evirgen-M-M
SO: Geological-Magazine. 121. (4). p. 323-337. R: 1984
AB: Assemblages with muscovite+quartz show a regular increase in grade from the Chlorite Zone at the base of the Lycian Nappe Complex to the Garnet Zone within the structurally underlying Menderes Massif. Biotite enters before garnet, which precedes oligoclase. Garnet-bearing assemblages in pelites are compared with those in re-equilibrated quartzofeldspathic gneisses, where garnet is unusually calcic (in one case approaching Gross50 Alm50). Garnet zoning, with Mn decreasing outwards, is interpreted as growth zoning; Ca decreases outwards in pelite garnets but shows the reverse effect in the gneisses. Chloritoid is common but rarely coexists with biotite, and garnet+chlorite+paragonite is found rather than chloritoid+albite. Garnet-biotite geothermometry, corrected for the effect of Ca in garnets with up to 29 mole % grossular, indicates temperatures of 530+ or -50 degrees C near the garnet isograd. Muscovite-paragonite geothermometry gives an anomalous result. Metamorphic pressure is considered in the light of (i) Mn/Fe partition between garnet and biotite, (ii) Ca content of garnet coexisting with plagioclase+muscovite+biotite, (iii) Na in actinolite coexisting with albite+chlorite+magnetite, and (iv) celadonite content of muscovite which, however, shows variation due to disequilibrium within a specimen and does not provide an accurate geobarometer. Comparisons with published studies indicate a strong similarity to the Barrovian Dalradian of Scotland and lead to a tentative pressure estimate of approximately 5 kbar.--Modified journal abstract.
DE: Turkey-; petrology-; metamorphic-rocks; metamorphism-; P-T-conditions; isograds-; gneisses-; Middle-East; Asia-; garnet-group; nesosilicates-; orthosilicates-; silicates-; mineral-assemblages; southwestern-Turkey; Menderes-Massif; grade-; chlorite-zone; Lycian-Nappe-complex; biotite-; mica-group; sheet-silicates; oligoclase-; plagioclase-; feldspar-group; framework-silicates; shale-; clastic-rocks; quartzofeldspathic-gneisses; zoning-; retrograde-metamorphism; geologic-thermometry; complexes-; chloritoid-; chlorite-; chlorite-group; paragonite-; muscovite-; celadonite-; pressure-; composition-

TI: Mineral parageneses and metamorphic reactions in metasedimentary enclaves from the Archaean Gneiss Complex of North-west India.
AU: Sharma-R-S; Windley-B-F
SO: Mineralogical-Magazine. 48 (Part 2). (347). p. 195-209.
YR: 1984
AB: Three metasedimentary enclaves. Banded Gneissic Complex (>2580Ma). The kyanite-chloritoid-muscovite schist with quartz or corundum, and kyanite-fuchsite-corundum+ or -diaspore was metamorphosed under lower amphibolite conditions, and is thus not isofacial with the surrounding schists and gneisses (of the

"basement" complex) which reached sillimanite-grade metamorphism in the last orogenic cycle (Aravalli: 1650-950Ma Orogeny) in Rajasthan. A calc-silicate rock occurs as a small lens. The presence of two generations of wollastonite which formed during different metamorphic events in the calcite-quartz-grossularite-anorthite-clinopyroxene assemblage indicates polymetamorphism. A metabasic rock records a complete polymetamorphic history in discontinuous zones in garnet coexisting with hornblende-chlorite-plagioclase-quartz+ or -epidote. The mineralogy of the calc-silicate and metabasic enclaves gives a recrystallization temperature of c. 700 degrees C and a pressure in the range of 8-3 kbar during the second metamorphism.--Modified journal abstract.
DE: India-; petrology-; metamorphic-rocks; metasedimentary-rocks; metamorphism-; polymetamorphism-; evolution-; paragenesis-; Indian-Peninsula; Asia-; northwestern-India; Archean-; Precambrian-; gneisses-; amphibolite-facies; prodgrade-metamorphism; retrograde-metamorphism; regional-metamorphism; mineral-assemblages; chemical-composition

TI: Mineral chemistry of regional chloritoid assemblages in the Chlorite Zone, Lycian Nappes, South-west Turkey.
AU: Ashworth-J-R; Evirgen-M-M
OS: Univ. Aston in Birmingham, Dep. Geol. Sci., Birmingham, United-Kingdom; Hacettepe Univ., Ankara, Turkey
SO: Mineralogical-Magazine. 48 (Part 2). (347). p. 159-165. YR: 1984
AB: Mn and inferred Fe(3+) contents of chloritoid are low. Chloritoid+quartz occur rather than the more hydrous equivalent pyrophyllite+chlorite, Fe/(Fe+Mg) values in chlorite ranging down to 0.27. Calcite and dolomite, which coexist with chloritoid and pyrophyllite, give a temperature estimate of 350+ or -30 degrees C, implying moderate to high activities of water for pyrophyllite stability. Intensity of color in chloritoid correlates with inferred Fe(3+) content, which decreases outwards in grains showing prograde growth zoning.--Modified journal abstract.
DE: Turkey-; petrology-; metamorphic-rocks; mineral-assemblages; chloritoid-; manganese-; geochemistry-; iron-; minerals-; nesosilicates-; Middle-East; Asia-; southwestern-Turkey; Lycian-Nappes; orthosilicates-; silicates-; paragonite-; mica-group; sheet-silicates; pyrophyllite-; calcite-; carbonates-; dolomite-; hematite-; oxides-

TI: Andalusitic and kyanitic facies series in the central Menderes Massif, Turkey.
AU: Evirgen-M-M; Ashworth-J-R
OS: Hacettepe Univ., Hidrojeol. Muehendisligi Bolumu, Ankara, Turkey; Univ. Aston, United-Kingdom
SO:Neues-Jahrbuch-fuer-Mineralogie,-Monatshefte. 1984. (5). p. 219-227. YR: 1984
AB: Coexisting with biotite+muscovite+quartz, both the facies series have chloritoid and staurolite zones. In one case these are succeeded by andalusite+staurolite, in the other case by kyanite+staurolite with sillimanite at some localities. The kyanite facies series is intermediate in pressure-type between the Barrovian and Stonehavian of Scotland. The andalusitic facies series is intermediate between the Stonehavian and classical lower-pressure sequences with cordierite. The coexistence chloritoid+biotite is a useful indicator of medium pressure in regional metamorphism.--Modified journal abstract.
DE: Turkey-; petrology-; metamorphism-; regional-metamorphism; facies-; metamorphic-rocks; mineral-assemblages; Middle-East; Asia-; Menderes-Massif; andalusite-; nesosilicates-; orthosilicates-; silicates-; kyanite-; Anatolia-; chloritoid-; staurolite-; petrography-

TI: Spectroscopic studies on natural chloritoids.
AU: Haalenius-U; Annersten-H; Langer-K
SO: Physics-and-Chemistry-of-Minerals. 7. (3). p. 117-123. YR: 1981
DE: minerals-; nesosilicates-; chloritoid-; crystal-chemistry; orthosilicates-; silicates-; absorption-spectroscopy; polarization-; Mossbauer-spectra; iron-; electron-probe-data; X-ray-powder-diffraction; cell-dimensions; geochemistry-

TI: New ways of characterizing layered silicates and their intercalates.
AU: Thomas-J-M
SO:Philosophical-Transactions-of-the-Royal-Society-of-London,-Series-A:-Mathematical-and-Physical-Sciences. 311. (1517). p. 271-285.
YR: 1984
DE: clay-mineralogy; experimental-studies; methods-; X-ray-analysis; applications-; spectroscopy-; minerals-; sheet-silicates; mineral-data; photoelectron-methods; X-ray-diffraction-analysis; X-ray-spectroscopy; nuclear-magnetic-resonance; silicates-; aluminum-; isotopes-; silicon-; Si-29; Al-27; serpentine-; serpentine-group; smectite-; clay-minerals; kandite-; vermiculite-;

chloritoid-; nesosilicates-; orthosilicates-; zeolite-group; framework-silicates

TI: Contrasted metamorphic evolutions in thrusted cover units of the Brianconnais Zone (French Alps); a model for the conservation of HP-LT metamorphic mineral assemblages.
AU: Goffe-B; Velde-B
SO: Earth-and-Planetary-Science-Letters. 68. (2). p. 351-360. YR: 1984
AB: The evolution of organic matter, silicate and fluid phases in cover units of the three structural zones of the Vanoise area allows one to distinguish different P-T cooling paths. All units first underwent a common high pressure, low-temperature (HP-LT) metamorphic stage (300 degrees C; 6 kbar) of blueschist type (Fe/Mg carpholite-chloritoid facies). The cover units transported on the external, colder zone (coal measure series metamorphosed in albite-chlorite facies), preserved their HP mineralogy (Fe/Mg carpholite, lawsonite) and organic matter content (oils, wet gases and kerogen) while the unit which remained in contact with its more thermally conductive basement (polymetamorphic) now shows extensive greenshcist facies overprinting (breakdown of Fe/Mg carpholite and lawsonite, appearance of chlorite, pyrophyllite, choritoid and clinozoisite; absence of oils and wet gases).
DE: France-; petrology-; metamorphism-; evolution-; mineral-assemblages; Western-Europe; Europe-; Alps-; French-Alps; Brianconnais-Zone; P-T-conditions; Vanoise-; organic-materials; silicates-; blueschist-; schists-; basement-; greenschist-facies

TI: Metamorphism in chloritoid and staurolite schists of the Hastings metamorphic low, southeastern Ontario.
AU: Leclair-A-D
SO: Program-with-Abstracts-Geological-Association-of-Canada. 8. p. A41 YR: 1983
DE: Ontario-; petrology-; metamorphic-rocks; schists-; phase-equilibria; SiO2-Al2-O3-FeO-MgO-K2-O-H2-O; metamorphism-; temperature-; Eastern-Canada; Canada-; southeastern-Ontario; Hastings-metamorphic-low; chloritoid-; nesosilicates-; orthosilicates-; silicates-; staurolite-; grade-; geologic-thermometry

TI: Chloritoid through sillimanite zone metamorphism of high-alumina pelites from the Hoosac Formation, western Massachusetts.
AU: Cheney-J-T
SO: Abstracts-with-Programs-Geological-Society-of-America. 12. (7). p. 401 YR: 1980
DE: Massachusetts-; petrology-; metamorphism-; polymetamorphism-; isograds-; New-England; Eastern-U.S.; United-States; western-Massachusetts; Hoosac-Formation; schists-; mineral-assemblages; inclusions-; zoning-; muscovite-; mica-group; sheet-silicates; silicates-; Acadian-Phase; Taconic-Orogeny; chloritoid-; nesosilicates-; orthosilicates-; sillimanite-

TI: Chloritoid amphibolites from the Pamur area, Andhra Pradesh, southern India.
AU: Reddy-D-S; Murty-M-S
SO: The-Canadian-Mineralogist. 21 (Part 4). p. 661-664. YR: 1983
DE: India-; petrology-; metamorphic-rocks; amphibolites-; minerals-; nesosilicates-; chloritoid-; Indian-Peninsula; Asia-; Andhra-Pradesh; southern-India; Prakasam-; Pamur-; orthosilicates-; silicates-; greenschist-facies; marl-; clastic-rocks; chemical-composition

TI: Reversals in partitioning of Fe and Mg between coexisting staurolite and chloritoid.
AU: Grambling-J-A
SO: Abstracts-with-Programs-Geological-Society-of-America. 13. (7). p. 463 YR: 1981
DE: New-Mexico; petrology-; phase-equilibria; iron-; geochemistry-; nesosilicates-; magnesium-; minerals-; crystal-chemistry; partitioning-; Southwestern-U.S.; United-States; northern-New-Mexico; orthosilicates-; silicates-; staurolite-; chloritoid-; Truchas-Range; Precambrian-; quartzite-; schists-; stability-; regression-analysis; statistical-analysis; P-T-conditions

TI: Notes on petrography and rock-forming mineralogy; (12), Chloritoid-bearing rocks from the pumpellyite-actinolite facies region of the Sanbagawa metamorphic belt in western central Shikoku.
AU: Aiba-K
SO: Ganseki-Kobutsu-Kosho-Gakkaishi. 77. (1). p. 18-22. YR: 1982
DE: Japan-; petrology-; metamorphic-rocks; metasedimentary-rocks; metapelite-; chloritoid-; nesosilicates-; orthosilicates-; silicates-; Sambagawa-Belt; Shikoku-; Far-East; Asia-; pumpellyite-actinolite-facies; pumpellyite-facies; actinolite-; clinoamphibole-; amphibole-group; chain-silicates; Chichibu-Zone; Nakatsu-District; Kochi-Prefecture

TI: Chloritoid through sillimanite zone metamorphism of high-alumina pelites from the Hoosac Formation, western Massachusetts.
AU: Cheney-J-T

SO: Abstracts-with-Programs-Geological-Society-of-America. 12. p. 401 YR: 1980
DE: Massachusetts-; petrology-; metamorphic-rocks; schists-; mineral-composition; metamorphism-; grade-; high-grade-metamorphism; Hoosac-Formation; New-England; Eastern-U.S.; United-States; western-Massachusetts; Gassetts-Schist; Cambrian-; chloritoid-; nesosilicates-; orthosilicates-; silicates-; sillimanite-; shale-; clastic-rocks; mineral-assemblages; garnet-group

TI: Reversals in Fe-Mg partitioning between chloritoid and staurolite.
AU: Grambling-J-A
SO: American-Mineralogist. 68. (3-4). p. 373-388 YR: 1983
AB: Chloritoid and staurolite coexist with Al silicate, chlorite, or garnet + or - biotite in Precambrian quartzite and schist from northern New Mexico. The observed Fe-Mg reversal is not related to variable P, T, or minor element content, including Fe(3+). However, it could arise from any of three factors: (1) Fe and Mg may occur on several crystallographic sites in one or both minerals; (2) some Mg may not be exchangeable with Fe in staurolite; or (3) Fe and Mg may mix non-ideally in one or both phases.--Modified journal abstract.
DE: New-Mexico; petrology-; metamorphic-rocks; mineral-assemblages; phase-equilibria; minerals-; partitioning-; nesosilicates-; chloritoid-; crystal-chemistry; iron-; geochemistry-; magnesium-; Rio-Arriba-County; Mora-County; Southwestern-U.S.; United-States; Sangre-de-Cristo-Mountains; Truchas-Range; coexisting-minerals; orthosilicates-; silicates-; staurolite-; quartzites-; schists-; textures-; reversals-; aluminosilicates-; electron-probe-data; Precambrian-

TI: Monoclinic chloritoid; calculations of unit cell volumes and densities in the pseudo-ternary system Fe-Ctd-Mn-Ctd-Mg-Ctd.
AU: Haalenius-U
SO: Lithos. 15. (3). p. 249-251. YR: 1982
DE: minerals-; nesosilicates-; chloritoid-; crystal-structure; density-; volume-; unit-cell; orthosilicates-; silicates-; regression-analysis; statistical-analysis; monoclinic-system; mineralogy-

TI: Chloritoid-bearing schists around Adyal, Bhandara District, Maharashtra.
AU: Bhaskar-Rao-B; Ramanathan-R-M
SO: Journal-of-the-Geological-Society-of-India. 22. (7). p. 351-353. YR: 1981
DE: India-; petrology-; metamorphic-rocks; schists-; P-T-conditions; metamorphism-; chloritoid-; nesosilicates-; orthosilicates-; silicates-; quartzites-; Maharashtra-; major-elements; Indian-Peninsula; Asia-; Adyal-; Bhandara-

TI: Ferroglaucophane- and chloritoid-bearing metapelites from the phyllite series, southern Peloponnese, Greece.
AU: Katagas-C
SO: Mineralogical-Magazine. 43. (332). p. 975-978. YR: 1980
DE: Greece-; petrology-; metamorphic-rocks; metasedimentary-rocks; metapelite-; Southern-Europe; Europe-; Peloponnesus-; mineral-assemblages; phyllites-; petrography-; chemical-composition; electron-probe-data; coexisting-minerals

TI: Chloritoid stability in very iron-rich altered pillow lavas.
AU: La-Tour-T-E; Kerrich-R; Hodder-R-W; Barnett-R-L
SO: Contributions-to-Mineralogy-and-Petrology. 74. (2). p. 165-173. YR: 1980
DE: isotopes-; oxygen-; O-18/O-16; metasomatism-; processes-; hydrothermal-alteration; Ontario-; petrology-; metasomatic-rocks; geochemistry-; lava-; pillow-structure; Eastern-Canada; Canada-; metavolcanic-rocks; chloritoid-; nesosilicates-; orthosilicates-; silicates-; Archean-; Precambrian-; Wawa-; Helen-Formation; stable-isotopes; chlorite-; chlorite-group; sheet-silicates; quartz-; silica-minerals; framework-silicates; ilmenite-; oxides-; causes-

TI: Kyanite and chloritoid phyllites from the chlorite zone of the SW Scottish Highlands.
AU: Burgess-J-G; Graham-C-M; Harte-B
SO: Journal-of-the-Geological-Society-of-London. 138 (Part 5). p. 634 YR: 1981
DE: Scotland-; petrology-; metamorphism-; regional-metamorphism; low-grade-metamorphism; metamorphic-rocks; phyllites-; mineral-composition; Great-Britain; United-Kingdom; Western-Europe; Europe-; kyanite-; nesosilicates-; orthosilicates-; silicates-; mineral-assemblages; Northern-Highlands; Grampian-Highlands

TI: Chloritoid.
AU: Ribbe-P-H
SO: Ribbe, P. H. Orthosilicates. Va. Polytech. Inst. State Univ., Dep. Geol., Blacksburg, VA, United-States. Reviews-in-Mineralogy. 5. p. 155-169.

YR: 1980
DE: minerals-; orthosilicates-; chloritoid-; silicates-; crystal-structure; crystal-chemistry; nesosilicates-

TI: Lower Paleozoic chloritoid-bearing rocks from South-east Ireland.
AU: Shannon-P-M
SO: Ir.-Nat.-J. 19. (7). p. 222-227. YR: 1978
DE: Ireland-; petrology-; metamorphic-rocks; mineral-assemblages; chloritoid-; orthosilicates-; silicates-; slate-; slates-; schist-; schists-; andalusite-; occurrence-; Europe-; Ballylane-Shale; Cambrian-; Paleozoic-; Ordovician-; New-Ross; Oilgate-; Polldarrig-Formation; River-Slaney; Ballynamuddagh-Granite; composition-; geochemistry-; tectonics-; minerals-

TI: Chloritoid rock, a possible metamorphosed aluminious laterite deposit from eastern Taiwan.
AU: Pei-Yuan-Chen; Liou-J-G
SO: Alumina and Aluminum conference. Trav.-Com.-Int.-Etud.-Bauxites,-Alum.-Alum. (15). p. 223-235. YR: 1979
DE: Taiwan-; economic-geology; bauxite-; minerals-; orthosilicates-; chloritoid-; metamorphic-rocks; schists-; composition-; Asia-; silicates-; bauxitization-; geochemistry-

TI: Chloritoid-forming reaction in the eastern Scottish Dalradian; a possibility.
AU: Baltatzis-E
YR: 1980
DE: Scotland-; petrology-; metamorphic-rocks; mineral-assemblages; chloritoid-; metamorphism-; grade-; low-grade-metamorphism; Europe-; Stonehaven-; Dalradian-; Precambrian-; Cambrian-; Paleozoic-; retrograde-metamorphism; orthosilicates-; silicates-; kaolinite-; sheet-silicates; pyrophyllite-; chemical-composition; schist-; schists-; Grampian-Highlands

TI: Chloritoid-staurolite assemblages in central Perthshire; discussion.
AU: Harte-B
SO: Geol.-Mag. 117. (6). p. 615-616. YR: 1980
DE: England-; petrology-; metamorphic-rocks; mineral-assemblages; evolution-; minerals-; orthosilicates-; staurolite-; Europe-; Perthshire-; chloritoid-; silicates-

TI: Microscope-photometric methods for non-destructive Fe(2+)-Fe(3+) determination in chloritoids (Fe(2+), Mn(2+), Mg)2(Al, Fe(3+)) 4Si2O10(OH)4.
AU: Haelenius-U; Langer-K
SO: Lithos. 13. (3). p. 291-294.
YR: 1980
DE: minerals-; orthosilicates-; chloritoid-; crystal-chemistry; mineralogy-; methods-; microscope-methods; crystallography-; spectroscopy-; Mossbauer-spectroscopy; silicates-; mineral-data; natural-materials; iron-; analysis-; Mossbauer-spectra; electron-probe-data; ferrous-iron; ferric-iron; experimental-studies; electron-probe; photometry-

TI: The structure of triclinic chloritoid and chloritoid polymorphism.
AU: Hanscom-R
SO: Am.-Mineral. 65. (5-6). p. 534-539. YR: 1980
DE: Quebec-; mineralogy-; orthosilicates-; minerals-; chloritoid-; crystal-structure; Canada-; Chibougamau-; silicates-; polymorphism-; triclinic-system; refinement-; bonding-; coordination-; natural-materials

TI: Calculated mineral equilibria in the pelite system, KFMASH (K2O-FeO-MgO-Al2O3-SiO2-H2O).
AU: Powell-Roger; Holland-Tim
SO: American-Mineralogist. 75. (3-4). p. 367-380. YR: 1990
DE: phase-equilibria; theoretical-studies; K2O-FeO-MgO-Al2O3-SiO2-H2O; metamorphic-rocks; mineral-assemblages; metamorphism-; P-T-conditions; coexisting-minerals; minerals-; silicates-; aluminosilicates-; KFMASH-; thermodynamic-properties; pelitic-texture; metasedimentary-rocks; staurolite-; nesosilicates-; orthosilicates-; chloritoid-; chlorite-; chlorite-group; sheet-silicates; biotite-; mica-group; cordierite-; ring-silicates; garnet-group; andalusite-; sillimanite-; kyanite-; muscovite-; quartz-; silica-minerals; framework-silicates

TI: Metamorphic mineral assemblages of slightly calcic pelitic rocks in and around the Taconic Allochthon, southwestern Massachusetts and adjacent Connecticut and New York.
AU: Zen-E-an
SO: U.-S.-Geological-Survey-Professional-Paper. 128 p. YR: 1981
AB: Slightly calcic pelitic rocks in the Taconic Allochthon of southwestern Massachusetts and adjoining New York and Connecticut were studied mineralogically and chemically. Microprobe as well as wet-chemical analyses of many samples of 12 different minerals provided the basis for a multisystematic analysis of the observed mineral assemblages. Observed mineralogical isograds were interpreted. Calcium is a significant element in almandinic garnet, chlorite, hornblende, epidote, and plagioclase; its essential role

in garnet provides the key to the interpretation of mineral assemblages that contain coexisting garnet, chlorite, chloritoid, biotite, muscovite, and quartz. Evidence is adduced that a Taconian regional metamorphism preceded the dominant Acadian metamorphism.--from New Publications of the Geological Survey, April 1981.
DE: Massachusetts-; petrology-; metamorphic-rocks; Connecticut-; New-York; mineral-assemblages; phase-equilibria; metamorphism-; polymetamorphism-; interpretation-; Acadian-Phase; allochthons-; calcic-composition; New-England; Eastern-U.S.; United-States; electron-probe-data; geochemistry-; isograds-; orogeny-; P-T-conditions; pelitic-texture; regional-metamorphism; Taconic-Allochthon; Taconic-Orogeny; USGS-

TI: Andalusite in the metamorphic aureole of the Bushveld Complex.
AU: Hammerbeck-E-C-I
SO: Anhaeusser, C. R., Maske, S. Mineral deposits of Southern Africa. p. 993-1004. YR: 1986
DE: South-Africa; economic-geology; ceramic-materials; Bushveld-Complex; andalusite-; nesosilicates-; orthosilicates-; silicates-; contact-metamorphism; metamorphism-; Pretoria-Group; metamorphic-processes; mineral-deposits,-genesis; cordierite-; ring-silicates; biotite-; mica-group; sheet-silicates; host-rocks; alteration-; soils-; Southern-Africa; Africa-; production-; stratigraphy-; distribution-; chemical-composition; qualitative-analysis; sillimanite-; chloritoid-; Transvaal-

TI: Calculated mineral equilibria in the pelite system, KFMASH (K2O-FeO-MgO-Al2O3-SiO2-H2O).
AU: Powell-Roger; Holland-Tim
SO: American-Mineralogist. 75. (3-4). p. 367-380. YR: 1990
DE: phase-equilibria; theoretical-studies; K2O-FeO-MgO-Al2O3-SiO2-H2O; metamorphic-rocks; mineral-assemblages; metamorphism-; P-T-conditions; coexisting-minerals; minerals-; silicates-; aluminosilicates-; KFMASH-; thermodynamic-properties; pelitic-texture; metasedimentary-rocks; staurolite-; nesosilicates-; orthosilicates-; chloritoid-; chlorite-; chlorite-group; sheet-silicates; biotite-; mica-group; cordierite-; ring-silicates; garnet-group; andalusite-; sillimanite-; kyanite-; muscovite-; quartz-; silica-minerals; framework-silicates

TI: Sudoite, a rock-forming mineral in Verrucano of the Northern Apennines (Italy) and the sudoite-chloritoid-pyrophyllite assemblage in prograde metamorphism.
AU: Franceschelli-M; Mellini-M; Memmi-I; Ricci-C-A
SO: Contributions-to-Mineralogy-and-Petrology. 101. (3). p. 274-279.
YR: 1989
DE: minerals-; sheet-silicates; chlorite-group; sudoite-; metamorphism-; prograde-metamorphism; mineral-assemblages; Italy-; petrology-; sheet-silicates,-chlorite-group; silicates-; pyrophyllite-; chloritoid-; nesosilicates-; orthosilicates-; muscovite-; mica-group; paragonite-; chemical-composition; Tuscany-; Emilia-Romagna; Apennines-; Southern-Europe; Europe-; Verrucano-

TI: A chloritoid-bearing paragenesis in the Macduff Slates of central Buchan.
AU: Leslie-A-G
SO: Scottish-Journal-of-Geology. 24. (3). p. 223-232.
YR: 1988
DE: Scotland-; petrology-; metamorphic-rocks; slates-; P-T-conditions; structural-geology; tectonics-; paragenesis-; Great-Britain; United-Kingdom; Western-Europe; Europe-; chloritoid-; nesosilicates-; orthosilicates-; silicates-; chlorite-; chlorite-group; sheet-silicates; phengitic-muscovite; muscovite-; mica-group; quartz-; silica-minerals; framework-silicates; opaque-minerals; facies-; Macduff-Slate; Insch-; folds-; overprinting-; Aberdeenshire-; Dalradian-; Kincardineshire-; Buchan-

TI: Petrogenetic implications of chloritoid-hornblende-muscovite pelitic rocks in the Central Metasedimentary Belt, SW Grenville Province.
AU: Thompson-P-H; Leclair-Alain-D
SO:Program-with-Abstracts-Geological-Association-of-Canada;-Mineralogical-Association-of-Canada;-Canadian-Geophysical-Union,-Joint-Annual-Meeting. 12. p. 96 YR: 1987
DE: Canadian-Shield; petrology-; metamorphic-rocks; chlorite-; chlorite-group; sheet-silicates; silicates-; hornblende-; clinoamphibole-; amphibole-group; chain-silicates; muscovite-; mica-group; slates-; schists-; Grenville-Province; Central-Metasedimentary-Belt; chemical-composition; mineral-composition; pelitic-texture; North-America; genesis-

TI: Timing and conditions of deformation and metamorphism of the structural packages east of Harrison Lake, B.C.
AU: Bennett-Jeffrey-D

OS: Western Washington University, United-States; Master's
YR: 1989
AB: Metamorphosed oceanic and arc-related lithologies of the Slollicum, Cogburn and Settler packages crop out to the east of Harrison Lake, B.C., within the southern Coast Plutonic Complex and represent the northern extension of the Cascade orogenic belt. The Cretaceous Spuzzum plutons intruded the packages in late syn- to post-metamorphic time, and several early Tertiary stocks intruded all units after deformation. The Slollicum package is dominated by graphitic to pelitic phyllite, and felsic to mafic arc volcanics intercalated with marble, conglomerate and quartzite. The sediments dominate western exposures, and eastern exposures are mainly volcanics. U-Pb analysis of zircon in a volcanic interbed gives a concordant 146 Ma depositional age for the Slollicum package. The Cogburn package is composed of structurally juxtaposed blocks of graphitic phyllite, mafic metavolcanics, banded chert and marble. Serpentinite is common. The Settler package is dominated by pelitic schist interlayered with quartzite, amphibolite and conglomerate. Foliations generally strike northwest, dip northeast and are accompanied by down-dip stretching lineations. Kinematic indicators show orogen-normal reverse-slip. Cleavage in the Slollicum package exhibits a strong influence of pressure solution. Cogburn and Settler packages each show two foliations, one preserved in poikiloblastic minerals and a dominant crenulation cleavage. The Harrison Lake shear zone is a late stage, right-lateral strike-slip shear zone that locally prints across the earlier fabrics after Spuzzum plutonism and prior to the intrusion of the early Tertiary stocks. Metamorphic grade increases eastward from the chlorite and biotite zones of the greenschist facies in the Slollicum package to the garnet zone of the greenschist facies and the oligoclase/hornblende zone of the amphibolite facies in the Cogburn package through the staurolite zone to the sillimanite zone of the amphibolite facies in the Settler package. Geothermobarometry indicates pressures of 3 to 4.5 kb in the biotite zone and 5.5 kb in the sillimanite zone. Temperatures in the sillimanite zone range up to approximately 750 degrees C. A poly-metamorphic history is indicated by pseudomorphs of kyanite after andalusite in the Settler package. Lineation-parallel slip on foliation planes, evidenced by augen-shaped and boudinaged metamorphic minerals indicates syn- to post-metamorphic deformation.
DE: British-Columbia; structural-geology; structural-analysis; foliation-; petrofabrics-; Western-Canada; Canada-; Harrison-Lake; Slollicum-Suite; Settler-Schist; Cogburn-Suite; deformation-; age-; Coast-Plutonic-Complex

TI: Kyanite paragneisses in the Dragsanu Group (Paring Mountains, South Carpathians).
AU: Solomon-I
SO:Mineralogie-Petrologie-Geochimie. 70-71. (1). p. 339-343. YR: 1983 [1986]
LA: English LS: French; Romanian
DE: Romania-; petrology-; metamorphic-rocks; metasedimentary-rocks; paragneiss-; metamorphism-; prograde-metamorphism; amphibolite-facies; gneisses-; kyanite-; nesosilicates-; orthosilicates-; silicates-; almandine-; garnet-group; staurolite-; mineral-assemblages; Paring-Mountains; Transylvanian-Alps; facies-; Carpathians-; Europe-; Southern-Europe; Dragsanu-Group

TI: Metamorphic history in the Bergen Arcs, Norway, as determined from amphibole chemistry.
AU: Fossen-H
SO: Norsk-Geologisk-Tidsskrift. 68. (4). p. 223-239. YR: 1988
DE: Norway-; petrology-; metamorphism-; evolution-; mineral-assemblages; Scandinavia-; Western-Europe; Europe-; grade-; chemical-composition; kyanite-; nesosilicates-; orthosilicates-; silicates-; staurolite-; paragenesis-; fabric-; electron-probe-data; amphibole-group; chain-silicates; garnet-group; Bergen-; Bergen-Arc

TI: Intersecting isograds, a possible way to find out the polymetamorphism; an example; the Somes series.
AU: Hartopanu-I; Hartopanu-P
SO:Mineralogie-Petrologie-Geochimie. 70-71. (1). p. 291-299. YR: 1983 [1986]
LA: English LS: French
DE: Romania-; petrology-; metamorphism-; polymetamorphism-; isograds-; phase-equilibria; silicates-; experimental-studies; mineral-assemblages; biotite-; mica-group; sheet-silicates; chlorite-; chlorite-group; kyanite-; nesosilicates-; orthosilicates-; staurolite-; almandine-; garnet-group; crystallization-; polyphase-processes; new-methods; Apuseni-Mountains; Southern-Europe; Europe-; Gilau-Mountains; Somes-Series

TI: Calculated mineral equilibria in the pelite system, KFMASH (K2O-FeO-MgO-Al2O3-SiO2-H2O).
AU: Powell-Roger; Holland-Tim
SO: American-Mineralogist. 75. (3-4). p. 367-380.
YR: 1990

DE: phase-equilibria; theoretical-studies; K2O-FeO-MgO-Al2O3-SiO2-H2O; metamorphic-rocks; mineral-assemblages; metamorphism-; P-T-conditions; coexisting-minerals; minerals-; silicates-; aluminosilicates-; KFMASH-; thermodynamic-properties; pelitic-texture; metasedimentary-rocks; staurolite-; nesosilicates-; orthosilicates-; chloritoid-; chlorite-; chlorite-group; sheet-silicates; biotite-; mica-group; cordierite-; ring-silicates; garnet-group; andalusite-; sillimanite-; kyanite-; muscovite-; quartz-; silica-minerals; framework-silicates

TI: Petrology of an andalusite-type regional metamorphism in Doda, Kashmir Himalaya, India.
AU: Das-Brijraj-K
OS: Panjab Univ., Cent. Adv. Stud. Geol., Chandigarh, India; Univ. Delhi, Dep. Geol., Delhi, India
SO: Delhi, Dep. Geol., Delhi, India. 12. p. 17-41.
YR: 1989
DE: India-; petrology-; metamorphism-; regional-metamorphism; P-T-conditions; phase-equilibria; metamorphic-rocks; textures-; pelitic-texture; Himalayas-; Indian-Peninsula; Asia-; andalusite-; nesosilicates-; orthosilicates-; silicates-; Doda-; Jammu-and-Kashmir; Kashmir-Himalayas; Salkhala-Group; Precambrian-; garnet-group; staurolite-; kyanite-; electron-probe-data; zoning-; chemical-composition; interpretation-

TI: A petrogenetic grid for pelitic schists in the system SiO2 -Al2 O3 -FeO-MgO-K2 O-H2 O.
AU: Spear-Frank-S; Cheney-J-T
SO: Contributions-to-Mineralogy-and-Petrology. 101. (2). p. 149-164. YR: 1989
DE: metamorphic-rocks; schists-; phase-equilibria; SiO2-Al2-O3-FeO-MgO-K2-O-H2-O; metapelite-; metasedimentary-rocks; silicon-; aluminum-; metals-; iron-; magnesium-; alkaline-earth-metals; potassium-; alkali-metals; oxygen-; garnet-group; nesosilicates-; orthosilicates-; silicates-; chlorite-; chlorite-group; sheet-silicates; biotite-; mica-group; cordierite-; ring-silicates; staurolite-; talc-; kyanite-; andalusite-; sillimanite-; pyrophyllite-; quartz-; silica-minerals; framework-silicates; muscovite-; K-feldspar; alkali-feldspar; feldspar-group; thermodynamic-properties; geochemistry-; properties-

TI: An early Proterozoic P-T(t) path from a metapelite, Black Hills, South Dakota.
AU: Terry-M-P; Friberg-L-M
SO: Abstracts-with-Programs-Geological-Society-of-America. 21. (4). p. 49 YR: 1989
DE: South-Dakota; petrology-; metamorphism-; Harney-Peak-Granite; Proterozoic-; upper-Precambrian; Precambrian-; P-T-conditions; metapelite-; metasedimentary-rocks; metamorphic-rocks; Midwest-; United-States; Black-Hills; southwestern-South-Dakota; electron-probe-data; inclusions-; zoning-; garnet-group; nesosilicates-; orthosilicates-; silicates-; mineral-assemblages; tectonics-; quartz-; silica-minerals; framework-silicates; staurolite-; chlorite-; chlorite-group; sheet-silicates; oligoclase-; plagioclase-; feldspar-group; biotite-; mica-group; muscovite-; kyanite-; sillimanite-; intrusions-

TI: Mineral assemblages and compositional variations, Barrovian metamorphic sequence, near Juneau.
AU: Himmelberg-G-R; Ford-A-B; Brew-D-A
SO: U.-S.-Geological-Survey-Professional-Paper. p. 80
YR: 1982 [1983]
DE: southeastern-Alaska; Alaska-; petrology-; metamorphic-rocks; mineral-assemblages; interpretation-; Western-U.S.; United-States; Barrovian-metamorphic-zone; biotite-; mica-group; sheet-silicates; silicates-; Blackerby-Ridge; cartography-; garnet-group; nesosilicates-; orthosilicates-; isograds-; Juneau-; kyanite-; mineralogy-; research-; sillimanite-; staurolite-; USGS-

TI: Experimental studies on metamorphism of crustal rocks under mantle pressures.
AU: Schreyer-Werner
SO: Mineralogical-Magazine. 52 (Part 1). (364). p. 1-26. YR: 1988
DE: metamorphic-rocks; metasedimentary-rocks; metapelite-; phase-equilibria; silicates-; MgO-Al2-O3-SiO2-H2-O; metamorphism-; P-T-conditions; experimental-studies; mineral-assemblages; geologic-thermometry; geologic-barometry; sudoite-; chlorite-group; sheet-silicates; chloritoid-; nesosilicates-; orthosilicates-; yoderite-; staurolite-; pumpellyite-; sorosilicates-; ellenbergite-; talc-; phengite-; mica-group; kyanite-; pyrope-; garnet-group; carpholite-; chain-silicates; chlorite-; K-feldspar; alkali-feldspar; feldspar-group; framework-silicates; mantle-; crust-; partial-melting

TI: The case for retrograde chlorite in staurolite-garnet-two-mica schist.
AU: Holdaway-M-J; Geving-R-L; Goodge-J-W; Dickerson-R-P; Dutrow-B-L
SO: Abstracts-with-Programs-Geological-Society-of-America. 19. (7). p. 705 YR: 1987

DE: metamorphic-rocks; schists-; mineral-composition; retrograde-metamorphism; metamorphism-; staurolite-; nesosilicates-; orthosilicates-; silicates-; sheet-silicates,-mica-group; orthosilicates,-garnet-group; chlorite-; chlorite-group; sheet-silicates; sillimanite-; kyanite-; P-T-conditions; Maine-; New-England; Eastern-U.S.; United-States; Nevada-; Western-U.S.; Hampton-Creek; Snake-Range; New-Mexico; Southwestern-U.S.; Picun's-Range

TI: Kyanite-staurolite-biotite-garnet in pelitic schists; extra components and implications for buffering of fluid.
AU: Giaramita-M-J; Day-Howard-W
SO: Abstracts-with-Programs-Geological-Society-of-America. 19. (7). p. 675 YR: 1987
DE: metamorphic-rocks; schists-; mineral-assemblages; mineral-composition; kyanite-; nesosilicates-; orthosilicates-; silicates-; staurolite-; biotite-; mica-group; sheet-silicates; orthosilicates,-garnet-group; isograds-; amphibolite-facies; KFMASH-; data-processing; Fortran-; computer-programs; phase-equilibria; buffers-

TI: Evidence from garnet zoning for over-thrusting in the eastern Maryland Piedmont.
AU: Lang-Helen-M
SO: Abstracts-with-Programs-Geological-Society-of-America. 19. (1). p. 24 YR: 1987
DE: Maryland-; petrology-; metamorphic-rocks; Baltimore-Gneiss; Eastern-U.S.; United-States; eastern-Maryland; Piedmont-; Phoenix-Nappe; thrust-faults; faults-; mineral-assemblages; garnet-group; nesosilicates-; orthosilicates-; silicates-; Hunt-Valley-Mall; biotite-; mica-group; sheet-silicates; staurolite-; kyanite-; sillimanite-

TI: Pressure, temperature, and structural evolution of the Orfordville Belt, west-central New Hampshire.
AU: Spear-Frank-S; Rumble-Douglas III
SO: Journal-of-Petrology. 27. (5). p. 1071-1093. YR: 1986
DE: New-Hampshire; petrology-; metamorphism-; P-T-conditions; interpretation-; metamorphic-rocks; amphibolites-; mineral-assemblages; phase-equilibria; inclusions-; mineral-inclusions; garnet-group; paragenesis-; Littleton-Formation; Partridge-Formation; Bethlehem-Gneiss; Ammonoosuc-Volcanics; Alber-Formation; Oliverian-Gneiss; Orfordville-Belt; west-central-New-Hampshire; New-England; Eastern-U.S.; United-States; nesosilicates-; orthosilicates-; silicates-; kyanite-; staurolite-; cooling-; deformation-; geologic-thermometry; geologic-barometry; Mount-Cube-Quadrangle; Hanover-Quadrangle; Paleozoic-; plagioclase-; feldspar - group; framework - silicates; zoning-; foliation-

TI: Regression modelling of metamorphic reactions in metapelites, Snow Peak, northern Idaho.
AU: Lang-Helen-M; Rice-Jack-M
SO: Journal-of-Petrology. 26. (4). p. 857-887. YR: 1985
DE: Idaho-; petrology-; metamorphism-; regional-metamorphism; P-T-conditions; metamorphic-rocks; metasedimentary-rocks; metapelite-; Clearwater-; Shoshone-; Belt-Supergroup; Prichard-Formation; Wallace-Formation; Snow-Peak; northern-Idaho; Idaho-Batholith; Clearwater-County; Shoshone-County; Western-U.S.; United-States; mineral-assemblages; chlorite-group; sheet-silicates; silicates-; biotite-; mica-group; garnet-group; nesosilicates-; orthosilicates-; kyanite-; staurolite-; zoning-; prograde-metamorphism; ilmenite-; oxides-; statistical-analysis; models-; dehydration-; Bathtub-Mountain

TI: Metamorphic reactions in the kyanite and sillimanite zones of the Barrovian type area.
AU: McLellan-Eileen
SO: Journal-of-Petrology. 26. (4). p. 789-818. YR: 1985
DE: Scotland-; petrology-; metamorphism-; regional-metamorphism; P-T-conditions; metamorphic-rocks; metasedimentary-rocks; mineral-assemblages; inclusions-; mineral-inclusions; staurolite-; Barrovian-; Tay-Nappe; Dalradian-; Caledonian-Orogeny; Grampian-Highlands; Great-Britain; United-Kingdom; Western-Europe; Europe-; kyanite-; nesosilicates-; orthosilicates-; silicates-; sillimanite-; biotite-; mica-group; sheet-silicates; muscovite-; garnet-group; Ben-Lui-Schist; Pitlochry-Schist; zoning-; dehydration-; ion-exchange; geologic-thermometry; geologic-barometry

TI: Heat capacities and entropies of sillimanite, fibrolite, andalusite, kyanite, and quartz and the Al2SiO5 phase diagram.
AU: Hemingway-Bruce-S; Robie-Richard-A; Evans-Howard-T Jr; Kerrick-Derrill-M
SO: American-Mineralogist. 76. (9-10). p. 1597-1613. YR: 1991
DE: geochemistry-; properties-; thermodynamic-properties; phase-equilibria; aluminosilicates-; experimental-studies; minerals-; nesosilicates-; sillimanite-; andalusite-; kyanite-; framework-silicates; silica-minerals; quartz-; crystal-growth; entropy-; heat-capacity; equations-; low-temperature; mineral-data; silicates-; orthosilicates-; polymorphism-; Montana-;

Western-U.S.; United-States; framework-silicates,-silica-minerals; natural-materials; crystal-structure

TI: Precise determinations of the equilibria kyanite - sillimanite and kyanite-andalusite and a revised triple point for Al2SiO5 polymorphs.
AU: Bohlen-Steven-R; Montana-Art; Kerrick-Derrill-M
SO: American-Mineralogist. 76. (3-4). p. 677-680. YR: 1991
DE: minerals-; nesosilicates-; andalusite-; sillimanite- ; kyanite-; aluminosilicates-; phase - equilibria; experimental - studies; polymorphism-; silicates-; orthosilicates - ; P-T-conditions; natural-materials

TI: Static lattice energy minimization and lattice dynamics calculations on aluminosilicate minerals.
AU: Winkler-Bjorn; Dove-Martin-T; Leslie-Maurice
SO: American-Mineralogist. 76. (3-4). p. 313-331. YR: 1991
DE: minerals-; aluminosilicates-; crystal-structure; lattice-; crystallography-; theoretical-studies; silicates-; energy-; crystal-field; thermodynamic-properties; coordination-; order-disorder; polymorphism-; static-lattice-energy; harmonic-lattice-dynamics; numerical-models; models-; andalusite-; nesosilicates-; orthosilicates-; sillimanite-; kyanite-; diopside-; clinopyroxene-; pyroxene-group; chain-silicates; cordierite-; ring-silicates; gehlenite-; melilite-group; sorosilicates-; leucite-; framework-silicates; orthozoisite-; grossular-; garnet-group; pyrope-

TI: Control of material transport and reaction mechanism by metastable mineral assemblages; an example involving kyanite, sillimanite, muscovite and quartz.
AU: Foster-C-T Jr
OS: Canada. Special-Publication-Geochemical-Society. 2. p. 121-132. YR: 1990
DE: geochemistry-; processes-; ion-exchange; metamorphic-rocks; mineral-assemblages; reactions-; kyanite-; nesosilicates-; orthosilicates-; silicates-; sillimanite-; muscovite-; mica-group; sheet-silicates; quartz-; silica-minerals; framework-silicates; thermodynamic-properties; transport-; P-T-conditions; crystal-growth; phase-equilibria; high-temperature; high-pressure; systems-; equilibrium-; buffers-

TI: Exhumed lower crust in NW Ireland, and a model for crustal conductivity.
AU: Sanders-I-S
SO: Journal-of-the-Geological-Society-of-London. 148 (Part 1). p. 131-135. YR: 1991
DE: Ireland-; petrology-; metamorphism-; retrograde-metamorphism; models-; Western-Europe; Europe-; northwestern-Ireland; crust-; gneisses-; granulite-facies; Ox-Mountains; imbricate-tectonics; Highland-Boundary-Fault; Clew-Bay; terranes-; decompression-; sillimanite-; nesosilicates-; orthosilicates-; silicates-; kyanite-; cooling-; continental-crust; shear-zones; hydration-; amphibolite-facies; saturation-; halite-; chlorides-; halides-; precipitation-; electrical-conductivity; tectonophysics-; cratonization-; Slishwood-; temperature-

TI: Rock pressures vs. fluid pressure as a controlling influence on mineral stability; an example from New Mexico.
AU: Holdaway-M-J; Goodge-J-W
SO: American-Mineralogist. 75. (9-10). p. 1043-1058. YR: 1990
DE: New-Mexico; petrology-; metamorphism-; P-T-conditions; pressure-; metamorphic-rocks; mineral-assemblages; phase-equilibria; metasedimentary-rocks; stability-; minerals-; silicates-; Taos-County-New-Mexico; Ortega-Group; Rinconada-Formation; Southwestern-U.S.; United-States; north-central-New-Mexico; Picuris-Range; fluid-pressure; quartzites-; schists-; solid-phase; Proterozoic-; upper-Precambrian; Precambrian-; kyanite-; nesosilicates-; orthosilicates-; sillimanite-; andalusite-; chloritoid-; staurolite-; geologic-barometry

TI: Calculated mineral equilibria in the pelite system, KFMASH (K2O-FeO-MgO-Al2O3-SiO2-H2O).
AU: Powell-Roger; Holland-Tim
SO: American-Mineralogist. 75. (3-4). p. 367-380. YR: 1990
DE: phase-equilibria; theoretical-studies; K2O-FeO-MgO-Al2O3-SiO2-H2O; metamorphic-rocks; mineral-assemblages; metamorphism-; P-T-conditions; coexisting-minerals; minerals-; silicates-; aluminosilicates-; KFMASH-; thermodynamic-properties; pelitic-texture; metasedimentary-rocks; staurolite-; nesosilicates-; orthosilicates-; chloritoid-; chlorite-; chlorite-group; sheet-silicates; biotite-; mica-group; cordierite-; ring-silicates; garnet-group; andalusite-; sillimanite-; kyanite-; muscovite-; quartz-; silica-minerals; framework-silicates

TI: Large andalusite crystals from Campbell County, Virginia; their alteration to kyanite and sillimanite and their other associated minerals.

AU: Mitchell-Richard-S; Giannini-William-F; Penick-D-Allen Jr
SO: Rocks-and-Minerals. 63. (6). p. 446-453. YR: 1988
DE: Virginia-; mineralogy-; nesosilicates-; minerals-; andalusite-; Campbell-County-Virginia; Southeastern-U.S.; Eastern-U.S.; United-States; orthosilicates-; silicates-; kyanite-; sillimanite-; crystal-form; Altavista-; Lynch-Station; paramorphs-; alteration-; popular-geology; collecting-; Piedmont-

TI: A petrogenetic grid for pelitic schists in the system SiO2 -Al2 O3 -FeO-MgO-K2 O-H2 O.
AU: Spear-Frank-S; Cheney-J-T
SO: Contributions-to-Mineralogy-and-Petrology. 101. (2). p. 149-164. YR: 1989
DE: metamorphic-rocks; schists-; phase-equilibria; SiO2-Al2-O3-FeO-MgO-K2-O-H2-O; metapelite-; metasedimentary-rocks; silicon-; aluminum-; metals-; iron-; magnesium-; alkaline-earth-metals; potassium-; alkali-metals; oxygen-; garnet-group; nesosilicates-; orthosilicates-; silicates-; chlorite-; chlorite-group; sheet-silicates; biotite-; mica-group; cordierite-; ring-silicates; staurolite-; talc-; kyanite-; andalusite-; sillimanite-; pyrophyllite-; quartz-; silica-minerals; framework-silicates; muscovite-; K-feldspar; alkali-feldspar; feldspar-group; thermodynamic-properties; geochemistry-; properties-

TI: Polyphase metamorphism and deformation in the eastern Blue Ridge, NE Georgia.
AU: McClellan-Elizabeth-A
SO: Abstracts-with-Programs-Geological-Society-of-America. 21. (3). p. 49 YR: 1989
DE: Georgia-; petrology-; metamorphism-; Corn-Ridge-Formation; Coweeta-Group; Tallulah-Falls-Quartzite; Southeastern-U.S.; Eastern-U.S.; United-States; northeastern-Georgia; polymetamorphism-; Blue-Ridge-Mountains; tectonostratigraphic-units; mineral-assemblages; overprinting-; folds-; retrograde-metamorphism; metasomatism-; biotite-; mica-group; sheet-silicates; silicates-; garnet-group; nesosilicates-; orthosilicates-; chlorite-; chlorite-group; muscovite-; sillimanite-; kyanite-; Swallow-Creek-Fault; Chunky-Gal-Mountain-Fault; Shope-Fork-Fault; tectonics-; faults-

TI: An early Proterozoic P-T(t) path from a metapelite, Black Hills, South Dakota.
AU: Terry-M-P; Friberg-L-M
SO: Abstracts-with-Programs-Geological-Society-of-America. 21. (4). p. 49 YR: 1989
DE: South-Dakota; petrology-; metamorphism-; Harney-Peak-Granite; Proterozoic-; upper-Precambrian; Precambrian-; P-T-conditions; metapelite-; metasedimentary-rocks; metamorphic-rocks; Midwest-; United-States; Black-Hills; southwestern-South-Dakota; electron-probe-data; inclusions-; zoning-; garnet-group; nesosilicates-; orthosilicates-; silicates-; mineral-assemblages; tectonics-; quartz-; silica-minerals; framework-silicates; staurolite-; chlorite-; chlorite-group; sheet-silicates; oligoclase-; plagioclase-; feldspar-group; biotite-; mica-group; muscovite-; kyanite-; sillimanite-; intrusions-

TI: The case for retrograde chlorite in staurolite-garnet-two-mica schist.
AU: Holdaway-M-J; Geving-R-L; Goodge-J-W; Dickerson-R-P; Dutrow-B-L
SO: Abstracts-with-Programs-Geological-Society-of-America. 19. (7). p. 705 YR: 1987
DE: metamorphic-rocks; schists-; mineral-composition; retrograde-metamorphism; metamorphism-; staurolite-; nesosilicates-; orthosilicates-; silicates-; sheet-silicates,-mica-group; orthosilicates,-garnet-group; chlorite-; chlorite-group; sheet-silicates; sillimanite-; kyanite-; P-T-conditions; Maine-; New-England; Eastern-U.S.; United-States; Nevada-; Western-U.S.; Hampton-Creek; Snake-Range; New-Mexico; Southwestern-U.S.; Picun's-Range

TI: Toward a solution of the staurolite enigma.
AU: Dutrow-Barbara-L; Holdaway-M-J
SO: Abstracts-with-Programs-Geological-Society-of-America. 19. (7). p. 649 YR: 1987
DE: minerals-; nesosilicates-; staurolite-; orthosilicates-; silicates-; mineral-assemblages; sillimanite-; kyanite-; phase-equilibria; geologic-thermometry; geologic-barometry; experimental-studies; thermodynamic-properties

TI: Granulite metamorphism, fluid buffering, and dehydration melting in the Madras charnockites and metapelites.
AU: Bhattacharya-A; Sen-S-K
SO: Journal-of-Petrology. 27. (5). p. 119-1141. YR: 1986
DE: India-; petrology-; metamorphic-rocks; mineral-assemblages; interpretation-; metamorphism-; grade-; granulite-facies; phase-equilibria; P-T-conditions; Madras-; Indian-Peninsula; Asia-; facies-; metacharnockite-; metapelite-; metasedimentary-rocks; high-pressure; geologic-thermometry; geologic-barometry; biotite-; mica-group; sheet-silicates; silicates-; phlogopite-; melting-; dehydration-; thermodynamic-properties; kyanite-; nesosilicates-; orthosilicates-; sillimanite-

TI: Metamorphic reactions in the kyanite and sillimanite zones of the Barrovian type area.
AU: McLellan-Eileen
SO: Journal-of-Petrology. 26. (4). p. 789-818. YR: 1985
DE: Scotland-; petrology-; metamorphism-; regional-metamorphism; P-T-conditions; metamorphic-rocks; metasedimentary-rocks; mineral-assemblages; inclusions-; mineral-inclusions; staurolite-; Barrovian-; Tay-Nappe; Dalradian-; Caledonian-Orogeny; Grampian-Highlands; Great-Britain; United-Kingdom; Western-Europe; Europe-; kyanite-; nesosilicates-; orthosilicates-; silicates-; sillimanite-; biotite-; mica-group; sheet-silicates; muscovite-; garnet-group; Ben-Lui-Schist; Pitlochry-Schist; zoning-; dehydration-; ion-exchange; geologic-thermometry; geologic-barometry

TI: Mineral chemistry and metasomatic growth of aluminous enclaves in gedrite-cordierite-gneiss from southwestern New Hampshire, USA.
AU: Schumacher-John-C; Robinson-Peter
SO: Journal-of-Petrology. 28. (6). p. 1033-1073. YR: 1987
DE: New-Hampshire; petrology-; metamorphic-rocks; gneisses-; mineral-assemblages; phase-equilibria; interpretation-; P-T-conditions; metasomatism-; Cheshire-; Ammonoosuc-Volcanics; Cheshire-County; Keene-gneiss-dome; southwestern-New-Hampshire; New-England; Eastern-U.S.; United-States; Middle-Ordovician; Ordovician-; Acadian-Phase; cordierite-; ring-silicates; silicates-; sillimanite-; nesosilicates-; orthosilicates-; kyanite-; corundum-; oxides-; staurolite-; sapphirine-; spinel-; gedrite-; orthoamphibole-; amphibole-group; chain-silicates; muscovite-; mica-group; sheet-silicates; textures-; pressure-

TI: Pressure, temperature and evolution of fluid compositions of Al2 SiO5 -bearing rocks, Mica Creek, B.C., in light of fluid inclusion data and mineral equilibria.
AU: Stout-M-Z; Crawford-M-L; Ghent-E-D
SO: Contributions-to-Mineralogy-and-Petrology. 92. (2). p. 236-247. YR: 1986
DE: British-Columbia; petrology-; metamorphic-rocks; metasedimentary-rocks; fluid-inclusions; P-T-conditions; interpretation-; metapelite-; sillimanite-; nesosilicates-; orthosilicates-; silicates-; kyanite-; andalusite-; quartz-; silica-minerals; framework-silicates; phase-equilibria; uplifts-; Western-Canada; Canada-; tectonics-; structural-geology; Mica-Creek; mineral-composition

TI: A contribution to the geology of the Bahariya Oasis, Western Desert, Egypt; Part 2, Mineralogy of the Upper Cretaceous clastics.
AU: Ismail-M-M; El-Nozahy-F-A; Sadeek-K-N
SO: GeoJournal. 19. (2). p. 221-229. YR: 1989
DE: Egypt-; sedimentary-petrology; sedimentary-rocks; clastic-rocks; mineral-composition; North-Africa; Africa-; Western-Desert; Bahariya-Oasis; Cretaceous-; Upper-Cretaceous; zircon-; nesosilicates-; orthosilicates-; silicates-; tourmaline-; ring-silicates; rutile-; oxides-; staurolite-; kyanite-; sandstone-; siltstone-; claystone-

TI: Mg- and Cr-rich staurolite and Cr-rich kyanite in high-pressure ultrabasic rocks (Cabo Ortegal, northwestern Spain).
AU: Gil-Ibarguchi-Jose-I; Mendia-Miren; Girardeau-Jacques
SO: American-Mineralogist. 76. (3-4). p. 501-511. YR: 1991
DE: Spain-; geochemistry-; trace-elements; minerals-; nesosilicates-; staurolite-; kyanite-; metamorphic-rocks; mineral-assemblages; phase-equilibria; crystal-chemistry; rare-earths; metamorphism-; temperature-; high-pressure; P-T-conditions; chromium-; Iberian-Peninsula; Southern-Europe; Europe-; northwestern-Spain; La-Coruna-Province; Cabo-Ortegal; orthosilicates-; silicates-; magnesium-; alkaline-earth-metals; metals-; substitution-; eclogite-; granulites-; major-elements; ultramafic-composition

TI: Rock pressures vs. fluid pressure as a controlling influence on mineral stability; an example from New Mexico.
AU: Holdaway-M-J; Goodge-J-W
SO: American-Mineralogist. 75. (9-10). p. 1043-1058. YR: 1990
DE: New-Mexico; petrology-; metamorphism-; P-T-conditions; pressure-; metamorphic-rocks; mineral-assemblages; phase-equilibria; metasedimentary-rocks; stability-; minerals-; silicates-; Taos-County-New-Mexico; Ortega-Group; Rinconada-Formation; Southwestern-U.S.; United-States; north-central-New-Mexico; Picuris-Range; fluid-pressure; quartzites-; schists-; solid-phase; Proterozoic-; upper-Precambrian; Precambrian-; kyanite-; nesosilicates-; orthosilicates-; sillimanite-; andalusite-; chloritoid-; staurolite-; geologic-barometry

TI: Metamorphism in Alabama; a review.
AU: Moore-W-B; Steltenpohl-M-G
SO: Abstracts-with-Programs-Geological-Society-of-America. 19. (7). p. 777 YR: 1987
DE: Alabama-; petrology-; metamorphism-; Southern-U.S.; United-States; Appalachians-; North-America; Piedmont-; Talladega-Front; Blue-Ridge-Province; Pine-Mountain-Window; Uchee-Belt; isograds-; grade-; chlorite-; chlorite-group; sheet-silicates; silicates-; sillimanite-; nesosilicates-; orthosilicates-; staurolite-; kyanite-; mineral-assemblages; Brevard-Fault; Towaliga-Fault; Goat-Rock-Fault; Georgia-; Southeastern-U.S.; Eastern-U.S.; Allegheny-Orogeny; Acadian-Phase; South-Carolina; Silurian-; Devonian-; Carboniferous-

TI: A petrogenetic grid for pelitic schists in the system SiO2 -Al2 O3 -FeO-MgO-K2 O-H2 O.
AU: Spear-Frank-S; Cheney-J-T
SO: Contributions-to-Mineralogy-and-Petrology. 101. (2). p. 149-164. YR: 1989
DE: metamorphic-rocks; schists-; phase-equilibria; SiO2-Al2-O3-FeO-MgO-K2-O-H2-O; metapelite-; metasedimentary-rocks; silicon-; aluminum-; metals-; iron-; magnesium-; alkaline-earth-metals; potassium-; alkali-metals; oxygen-; garnet-group; nesosilicates-; orthosilicates-; silicates-; chlorite-; chlorite-group; sheet-silicates; biotite-; mica-group; cordierite-; ring-silicates; staurolite-; talc-; kyanite-; andalusite-; sillimanite-; pyrophyllite-; quartz-; silica-minerals; framework-silicates; muscovite-; K-feldspar; alkali-feldspar; feldspar-group; thermodynamic-properties; geochemistry-; properties-

TI: Tectonothermal evolution of the SW North Carolina Blue Ridge in the Noland Creek-Wayah amphibolite/granulite transition.
AU: Eckert-James-O Jr
SO: Abstracts-with-Programs-Geological-Society-of-America. 21. (3). p. 13-14 YR: 1989
DE: North-Carolina; petrology-; metamorphism-; Southeastern-U.S.; Eastern-U.S.; United-States; Blue-Ridge-Province; Franklin-North-Carolina; Macon-County-North-Carolina; southwestern-North-Carolina; Noland-Creek-Wyah-Transition; granulite-facies; amphibolite-facies; P-T-conditions; burial-metamorphism; garnet-group; nesosilicates-; orthosilicates-; silicates-; zoning-; kyanite-; grade-; staurolite-; hornblende-; clinoamphibole-; amphibole-group; chain-silicates; Taconic-Orogeny; pelitic-texture; geothermal-gradient; tectonics-; regional-metamorphism

TI: An early Proterozoic P-T(t) path from a metapelite, Black Hills, South Dakota.
AU: Terry-M-P; Friberg-L-M
SO: Abstracts-with-Programs-Geological-Society-of-America. 21. (4). p. 49 YR: 1989
DE: South-Dakota; petrology-; metamorphism-; Harney-Peak-Granite; Proterozoic-; upper-Precambrian; Precambrian-; P-T-conditions; metapelite-; metasedimentary-rocks; metamorphic-rocks; Midwest-; United-States; Black-Hills; southwestern-South-Dakota; electron-probe-data; inclusions-; zoning-; garnet-group; nesosilicates-; orthosilicates-; silicates-; mineral-assemblages; tectonics-; quartz-; silica-minerals; framework-silicates; staurolite-; chlorite-; chlorite-group; sheet-silicates; oligoclase-; plagioclase-; feldspar-group; biotite-; mica-group; muscovite-; kyanite-; sillimanite-; intrusions-

TI: Variation in metamorphic temperature and pressure within the Baltimore gneiss terrane, Maryland.
AU: Lang-Helen-M
SO: Abstracts-with-Programs-Geological-Society-of-America. 20. (1). p. 31 YR: 1988
DE: Maryland-; petrology-; metamorphism-; Baltimore-Gneiss; terranes-; Eastern-U.S.; United-States; metamorphic-rocks; mineral-assemblages; P-T-conditions; staurolite-; nesosilicates-; orthosilicates-; silicates-; kyanite-; sillimanite-; zoning-; nappes-; geologic-thermometry; geologic-barometry; metapelite-; metasedimentary-rocks

TI: Experimental studies on metamorphism of crustal rocks under mantle pressures.
AU: Schreyer-Werner
SO: Mineralogical-Magazine. 52 (Part 1). (364). p. 1-26.YR: 1988
DE: metamorphic-rocks; metasedimentary-rocks; metapelite-; phase-equilibria; silicates-; MgO-Al2-O3-SiO2-H2-O; metamorphism-; P-T-conditions; experimental-studies; mineral-assemblages; geologic-thermometry; geologic-barometry; sudoite-; chlorite-group; sheet-silicates; chloritoid-; nesosilicates-; orthosilicates-; yoderite-; staurolite-; pumpellyite-; sorosilicates-; ellenbergite-; talc-; phengite-; mica-group; kyanite-; pyrope-; garnet-group; carpholite-; chain-silicates; chlorite-; K-feldspar; alkali-feldspar; feldspar-group; framework-silicates; mantle-; crust-; partial-melting

TI: The case for retrograde chlorite in staurolite-garnet-two-mica schist.
AU: Holdaway-M-J; Geving-R-L; Goodge-J-W; Dickerson-R-P; Dutrow-B-L

SO: Abstracts-with-Programs-Geological-Society-of-America. 19. (7). p. 705 YR: 1987
DE: metamorphic-rocks; schists-; mineral-composition; retrograde-metamorphism; metamorphism-; staurolite-; nesosilicates-; orthosilicates-; silicates-; sheet-silicates,-mica-group; orthosilicates,-garnet-group; chlorite-; chlorite-group; sheet-silicates; sillimanite-; kyanite-; P-T-conditions; Maine-; New-England; Eastern-U.S.; United-States; Nevada-; Western-U.S.; Hampton-Creek; Snake-Range; New-Mexico; Southwestern-U.S.; Picun's-Range

TI: Kyanite-staurolite-biotite-garnet in pelitic schists; extra components and implications for buffering of fluid.
AU: Giaramita-M-J; Day-Howard-W
SO: Abstracts-with-Programs-Geological-Society-of-America. 19. (7). p. 675 YR: 1987
DE: metamorphic-rocks; schists-; mineral-assemblages; mineral-composition; kyanite-; nesosilicates-; orthosilicates-; silicates-; staurolite-; biotite-; mica-group; sheet-silicates; orthosilicates,-garnet-group; isograds-; amphibolite-facies; KFMASH-; data-processing; Fortran-; computer-programs; phase-equilibria; buffers-

TI: Alleghanian strain partitioning in the Southern Appalachians, Virginia.
AU: Gates-A
SO: Abstracts-with-Programs-Geological-Society-of-America. 20. (4). p. 266 YR: 1988
DE: Virginia-; structural-geology; deformation-; Allegheny-Mountains; strain-; Appalachians-; North-America; Southeastern-U.S.; Eastern-U.S.; United-States; shear-; faults-; staurolite-; nesosilicates-; orthosilicates-; silicates-; kyanite-; greenschist-; schists-; Bowens-Creek; Carboniferous-; Permian-; Paleozoic-

TI: Conditions in the metamorphic transition from the staurolite-kyanite zone to the hornblende granulite facies core near Franklin, North Carolina; petrologic evidence for a continuous Paleozoic progression.
AU: Eckert-J; Mohr-D
SO: Abstracts-with-Programs-Geological-Society-of-America. 20. (4). p. 262 YR: 1988
DE: North-Carolina; petrology-; metamorphism-; metamorphic-processes; staurolite-; nesosilicates-; orthosilicates-; silicates-; minerals-; kyanite-; hornblende-; clinoamphibole-; amphibole-group; chain-silicates; granulites-; Franklin-; Southeastern-U.S.; Eastern-U.S.; United-States; Paleozoic-; mineral-composition; transition-zone; plate-tectonics; Hayesville-fault; faults-; P-T-conditions

TI: Evidence from garnet zoning for over-thrusting in the eastern Maryland Piedmont.
AU: Lang-Helen-M
SO: Abstracts-with-Programs-Geological-Society-of-America. 19. (1). p. 24 YR: 1987
DE: Maryland-; petrology-; metamorphic-rocks; Baltimore-Gneiss; Eastern-U.S.; United-States; eastern-Maryland; Piedmont-; Phoenix-Nappe; thrust-faults; faults-; mineral-assemblages; garnet-group; nesosilicates-; orthosilicates-; silicates-; Hunt-Valley-Mall; biotite-; mica-group; sheet-silicates; staurolite-; kyanite-; sillimanite-

TI: Pressure, temperature, and structural evolution of the Orfordville Belt, west-central New Hampshire.
AU: Spear-Frank-S; Rumble-Douglas III
SO: Journal-of-Petrology. 27. (5). p. 1071-1093. YR: 1986
DE: New-Hampshire; petrology-; metamorphism-; P-T-conditions; interpretation-; metamorphic-rocks; amphibolites-; mineral-assemblages; phase-equilibria; inclusions-; mineral-inclusions; garnet-group; paragenesis-; Littleton-Formation; Partridge-Formation; Bethlehem-Gneiss; Ammonoosuc-Volcanics; Alber-Formation; Oliverian-Gneiss; Orfordville-Belt; west-central-New-Hampshire; New-England; Eastern-U.S.; United-States; nesosilicates-; orthosilicates-; silicates-; kyanite-; staurolite-; cooling-; deformation-; geologic-thermometry; geologic-barometry; Mount-Cube-Quadrangle; Hanover-Quadrangle; Paleozoic-; plagioclase-; feldspar-group; framework-silicates; zoning-; foliation-

TI: Regression modelling of metamorphic reactions in metapelites, Snow Peak, northern Idaho.
AU: Lang-Helen-M; Rice-Jack-M
SO: Journal-of-Petrology. 26. (4). p. 857-887. YR: 1985
DE: Idaho-; petrology-; metamorphism-; regional-metamorphism; P-T-conditions; metamorphic-rocks; metasedimentary-rocks; metapelite-; Clearwater-; Shoshone-; Belt-Supergroup; Prichard-Formation; Wallace-Formation; Snow-Peak; northern-Idaho; Idaho-Batholith; Clearwater-County; Shoshone-County; Western-U.S.; United-States; mineral-assemblages; chlorite-group; sheet-silicates; silicates-; biotite-; mica-group; garnet-group; nesosilicates-; orthosilicates-; kyanite-; staurolite-; zoning-; prograde-metamorphism;

ilmenite-; oxides-; statistical-analysis; models-; dehydration-; Bathtub-Mountain

TI: Metamorphic reactions in the kyanite and sillimanite zones of the Barrovian type area.
AU: McLellan-Eileen
SO: Journal-of-Petrology. 26. (4). p. 789-818. YR: 1985
DE: Scotland-; petrology-; metamorphism-; regional-metamorphism; P-T-conditions; metamorphic-rocks; metasedimentary-rocks; mineral-assemblages; inclusions-; mineral-inclusions; staurolite-; Barrovian-; Tay-Nappe; Dalradian-; Caledonian-Orogeny; Grampian-Highlands; Great-Britain; United-Kingdom; Western-Europe; Europe-; kyanite-; nesosilicates-; orthosilicates-; silicates-; sillimanite-; biotite-; mica-group; sheet-silicates; muscovite-; garnet-group; Ben-Lui-Schist; Pitlochry-Schist; zoning-; dehydration-; ion-exchange; geologic-thermometry; geologic-barometry

TI: Mineral chemistry and metasomatic growth of aluminous enclaves in gedrite-cordierite-gneiss from southwestern New Hampshire, USA.
AU: Schumacher-John-C; Robinson-Peter
SO: Journal-of-Petrology. 28. (6). p. 1033-1073. YR: 1987
DE: New-Hampshire; petrology-; metamorphic-rocks; gneisses-; mineral-assemblages; phase-equilibria; interpretation-; P-T-conditions; metasomatism-; Cheshire-; Ammonoosuc-Volcanics; Cheshire-County; Keene-gneiss-dome; southwestern-New-Hampshire; New-England; Eastern-U.S.; United-States; Middle-Ordovician; Ordovician-; Acadian-Phase; cordierite-; ring-silicates; silicates-; sillimanite-; nesosilicates-; orthosilicates-; kyanite-; corundum-; oxides-; staurolite-; sapphirine-; spinel-; gedrite-; orthoamphibole-; amphibole-group; chain-silicates; muscovite-; mica-group; sheet-silicates; textures-; pressure-

TI: Petrology of a Georgia Blue Ridge amphibolite unit with hornblende + gedrite + kyanite + staurolite.
AU: Helms-Thomas-S; McSween-Harry-Y Jr; Labotka-Theodore-C; Jarosewich-Eugene
SO: American-Mineralogist. 72. (11-12). p. 1086-1096. YR: 1987
DE: phase-equilibria; amphibolites-; P-T-conditions; metamorphism-; amphibolite-facies; metamorphic-rocks; facies-; Georgia-; petrology-; Rabun-; Laurel-Creek-Complex; Southeastern-U.S.; Eastern-U.S.; United-States; northeastern-Georgia; Blue-Ridge-Mountains; Rabun-County; Southern-Appalachians; Appalachians-; stability-; electron-probe-data; grade-; mineral-assemblages

TI: Heat capacities and entropies of sillimanite, fibrolite, andalusite, kyanite, and quartz and the Al2SiO5 phase diagram.
AU: Hemingway-Bruce-S; Robie-Richard-A; Evans-Howard-T Jr; Kerrick-Derrill-M
SO: American-Mineralogist. 76. (9-10). p. 1597-1613. YR: 1991
DE: geochemistry-; properties-; thermodynamic-properties; phase-equilibria; aluminosilicates-; experimental-studies; minerals-; nesosilicates-; sillimanite-; andalusite-; kyanite-; framework-silicates; silica-minerals; quartz-; crystal-growth; entropy-; heat-capacity; equations-; low-temperature; mineral-data; silicates-; orthosilicates-; polymorphism-; Montana-; Western-U.S.; United-States; framework-silicates,-silica-minerals; natural-materials; crystal-structure

TI: Static lattice energy minimization and lattice dynamics calculations on aluminosilicate minerals.
AU: Winkler-Bjorn; Dove-Martin-T; Leslie-Maurice
SO: American-Mineralogist. 76. (3-4). p. 313-331.YR: 1991
DE: minerals-; aluminosilicates-; crystal-structure; lattice-; crystallography-; theoretical-studies; silicates-; energy-; crystal-field; thermodynamic-properties; coordination-; order-disorder; polymorphism-; static-lattice-energy; harmonic-lattice-dynamics; numerical-models; models-; andalusite-; nesosilicates-; orthosilicates-; sillimanite-; kyanite-; diopside-; clinopyroxene-; pyroxene-group; chain-silicates; cordierite-; ring-silicates; gehlenite-; melilite-group; sorosilicates-; leucite-; framework-silicates; orthozoisite-; grossular-; garnet-group; pyrope-

TI: Exhumed lower crust in NW Ireland, and a model for crustal conductivity.
AU: Sanders-I-S
SO: Journal-of-the-Geological-Society-of-London. 148 (Part 1). p. 131-135.YR: 1991
DE: Ireland-; petrology-; metamorphism-; retrograde-metamorphism; models-; Western-Europe; Europe-; northwestern-Ireland; crust-; gneisses-; granulite-facies; Ox-Mountains; imbricate-tectonics; Highland-Boundary-Fault; Clew-Bay; terranes-; decompression-; sillimanite-; nesosilicates-; orthosilicates-; silicates-; kyanite-; cooling-; continental-crust; shear-zones; hydration-; amphibolite-facies; saturation-; halite-; chlorides-; halides-; precipitation-; electrical-conductivity; tectonophysics-; cratonization-; Slishwood-; temperature-

TI: Rock pressures vs. fluid pressure as a controlling influence on mineral stability; an example from New Mexico.
AU: Holdaway-M-J; Goodge-J-W
SO: American-Mineralogist. 75. (9-10). p. 1043-1058. YR: 1990
DE: New-Mexico; petrology-; metamorphism-; P-T-conditions; pressure-; metamorphic-rocks; mineral-assemblages; phase-equilibria; metasedimentary-rocks; stability-; minerals-; silicates-; Taos-County-New-Mexico; Ortega-Group; Rinconada-Formation; Southwestern-U.S.; United-States; north-central-New-Mexico; Picuris-Range; fluid-pressure; quartzites-; schists-; solid-phase; Proterozoic-; upper-Precambrian; Precambrian-; kyanite-; nesosilicates-; orthosilicates-; sillimanite-; andalusite-; chloritoid-; staurolite-; geologic-barometry

TI: Alumino-silicate minerals; refractories steel the show.
AU: McMichael-Bruce
SO: Industrial-Minerals. 277. p. 27, 29-30, 32, 35, 37-38, 41, 43 YR: 1990
DE: ceramic-materials; production-; refractory-materials; aluminosilicates-; silicates-; andalusite-; nesosilicates-; orthosilicates-; South-Africa; Southern-Africa; Africa-; France-; Western-Europe; Europe-; kyanite-; mullite-; markets-; sillimanite-; synthetic-materials; India-; Indian-Peninsula; Asia-; China-; Far-East; Virginia-; Southeastern-U.S.; Eastern-U.S.; United-States; Australia-; Australasia-; Brazil-; South-America; Sweden-; Scandinavia-

TI: Metabasites; an indicator of late Archean geologic history in the Tobacco Root Mountains, Madison County, Montana.
AU: Hess-David-F; Vitaliano-Charles-J
SO: Abstracts-with-Programs-Geological-Society-of-America. 22. (5). p. 13 YR: 1990
DE: Montana-; petrology-; metamorphic-rocks; metaigneous-rocks; metabasite-; Madison-County-Montana; Tobacco-Root-Mountains; Western-U.S.; United-States; Archean-; Precambrian-; environmental-analysis; nappes-; ultramafics-; arcuate-faults; faults-; clinopyroxene-; pyroxene-group; chain-silicates; silicates-; kyanite-; nesosilicates-; orthosilicates-; sillimanite-; garnet-group; hornblende-; clinoamphibole-; amphibole-group; plagioclase-; feldspar-group; framework-silicates; quartz-; silica-minerals; P-T-conditions; aluminosilicates-; mafic-composition; southwestern-Montana

TI: Calculated mineral equilibria in the pelite system, KFMASH (K2O-FeO-MgO-Al2O3-SiO2-H2O).
AU: Powell-Roger; Holland-Tim
SO: American-Mineralogist. 75. (3-4). p. 367-380. YR: 1990
DE: phase-equilibria; theoretical-studies; K2O-FeO-MgO-Al2O3-SiO2-H2O; metamorphic-rocks; mineral-assemblages; metamorphism-; P-T-conditions; coexisting-minerals; minerals-; silicates-; aluminosilicates-; KFMASH-; thermodynamic-properties; pelitic-texture; metasedimentary-rocks; staurolite-; nesosilicates-; orthosilicates-; chloritoid-; chlorite-; chlorite-group; sheet-silicates; biotite-; mica-group; cordierite-; ring-silicates; garnet-group; andalusite-; sillimanite-; kyanite-; muscovite-; quartz-; silica-minerals; framework-silicates

TI: Large andalusite crystals from Campbell County, Virginia; their alteration to kyanite and sillimanite and their other associated minerals.
AU: Mitchell-Richard-S; Giannini-William-F; Penick-D-Allen Jr
SO: Rocks-and-Minerals. 63. (6). p. 446-453.YR: 1988
DE: Virginia-; mineralogy-; nesosilicates-; minerals-; andalusite-; Campbell-County-Virginia; Southeastern-U.S.; Eastern-U.S.; United-States; orthosilicates-; silicates-; kyanite-; sillimanite-; crystal-form; Altavista-; Lynch-Station; paramorphs-; alteration-; popular-geology; collecting-; Piedmont-

TI: A petrogenetic grid for pelitic schists in the system SiO2 -Al2 O3 -FeO-MgO-K2 O-H2 O.
AU: Spear-Frank-S; Cheney-J-T
SO: Contributions-to-Mineralogy-and-Petrology. 101. (2). p. 149-164. YR: 1989
DE: metamorphic-rocks; schists-; phase-equilibria; SiO2-Al2-O3-FeO-MgO-K2-O-H2-O; metapelite-; metasedimentary-rocks; silicon-; aluminum-; metals-; iron-; magnesium-; alkaline-earth-metals; potassium-; alkali-metals; oxygen-; garnet-group; nesosilicates-; orthosilicates-; silicates-; chlorite-; chlorite-group; sheet-silicates; biotite-; mica-group; cordierite-; ring-silicates; staurolite-; talc-; kyanite-; andalusite-; sillimanite-; pyrophyllite-; quartz-; silica-minerals; framework-silicates; muscovite-; K-feldspar; alkali-feldspar; feldspar-group; thermodynamic-properties; geochemistry-; properties-

TI: Polyphase metamorphism and deformation in the eastern Blue Ridge, NE Georgia.

AU: McClellan-Elizabeth-A
SO: Abstracts-with-Programs-Geological-Society-of-America. 21. (3). p. 49
YR: 1989
DE: Georgia-; petrology-; metamorphism-; Corn-Ridge-Formation; Coweeta-Group; Tallulah-Falls-Quartzite; Southeastern-U.S.; Eastern-U.S.; United-States; northeastern-Georgia; polymetamorphism-; Blue-Ridge-Mountains; tectonostratigraphic-units; mineral-assemblages; overprinting-; folds-; retrograde-metamorphism; metasomatism-; biotite-; mica-group; sheet-silicates; silicates-; garnet-group; nesosilicates-; orthosilicates-; chlorite-; chlorite-group; muscovite-; sillimanite-; kyanite-; Swallow-Creek-Fault; Chunky-Gal-Mountain-Fault; Shope-Fork-Fault; tectonics-; faults-

TI: UV to NIR spectra of silicate minerals obtained by microscope spectrometry and their use in mineral thermodynamics and kinetics.
AU: Langer-K
SO: Mathematical-and-Physical-Sciences. 225. p. 639-685. YR: 1987
DE: geophysics-; experimental-studies; kinetics-; spectra-;silicates-;thermodynamic-properties; crystals-; equations-; entropy-; garnet-group; nesosilicates-; orthosilicates-; enthalpy-; kyanite-; sillimanite-; andalusite-

TI: The case for retrograde chlorite in staurolite-garnet-two-mica schist.
AU: Holdaway-M-J; Geving-R-L; Goodge-J-W; Dickerson-R-P; Dutrow-B-L
SO: Abstracts-with-Programs-Geological-Society-of-America. 19. (7). p. 705 YR: 1987
DE: metamorphic-rocks; schists-; mineral-composition; retrograde-metamorphism; metamorphism-; staurolite-; nesosilicates-; orthosilicates-; silicates-; sheet-silicates,-mica-group; orthosilicates,-garnet-group; chlorite-; chlorite-group; sheet-silicates; sillimanite-; kyanite-; P-T-conditions; Maine-; New-England; Eastern-U.S.; United-States; Nevada-; Western-U.S.; Hampton-Creek; Snake-Range; New-Mexico; Southwestern-U.S.; Picun's-Range

TI: Pressure-temperature and evolution of fluid compositions of Al2 SiO5 -bearing rocks, Mica Creek, British Columbia, in light of fluid inclusion data and mineral equilibria.
AU: Stout-M-Z; Crawford-M-L; Ghent-E-D
SO: Mathematical-and-Physical-Sciences. 218. p. 758 YR: 1987
DE: British-Columbia; petrology-; fluid-inclusions; P-T-conditions; schists-; Western-Canada; Canada-; evolution-; Mica-Creek; pelitic-texture; sillimanite-; nesosilicates-; orthosilicates-; silicates-; kyanite-; fibrolite-; andalusite-; quartz-; silica-minerals; framework-silicates; mineral-composition; density-; composition-; gases-; carbon-dioxide; methane-; hydrocarbons-; organic-materials

TI: Mineral chemistry and metasomatic growth of aluminous enclaves in gedrite-cordierite-gneiss from southwestern New Hampshire, USA.
AU: Schumacher-John-C; Robinson-Peter
SO: Journal-of-Petrology. 28. (6). p. 1033-1073. YR: 1987
DE: New-Hampshire; petrology-; metamorphic-rocks; gneisses-; mineral-assemblages; phase-equilibria; interpretation-; P-T-conditions; metasomatism-; Cheshire-; Ammonoosuc-Volcanics; Cheshire-County; Keene-gneiss-dome; southwestern-New-Hampshire; New-England; Eastern-U.S.; United-States; Middle-Ordovician; Ordovician-; Acadian-Phase; cordierite-; ring-silicates; silicates-; sillimanite-; nesosilicates-; orthosilicates-; kyanite-; corundum-; oxides-; staurolite-; sapphirine-; spinel-; gedrite-; orthoamphibole-; amphibole-group; chain-silicates; muscovite-; mica-group; sheet-silicates; textures-; pressure-

TI: Kyanite in the mainland Lewisian complex.
AU: Barnicoat-A-C; Cartwright-I; O'-Hara-M-J
SO: Scottish-Journal-of-Geology. 23 (Part 2). p. 209-213. YR: 1987
DE: Scotland-; petrology-; metamorphism-; P-T-conditions; kyanite-; minerals-; nesosilicates-; Great-Britain; United-Kingdom; Western-Europe; Europe-; Lewisian-; Precambrian-; orthosilicates-; silicates-; Badcallian-; northwestern-Scotland; sillimanite-; Achiltibuie-; Drumbeg-; Scourie-; Saint-Stoer; Badcall-

TI: Araguaia-Tocantins fold belt, Brazil; a Brasiliano-Panafrican cycle (600Ma) reactivated geosuture.
AU: Hasui-Y; Herz-N; Matta-M-A
SO: Abstracts-with-Programs-Geological-Society-of-America. 18. (6). p. 630-631 YR: 1986
DE: Brazil-; petrology-; metamorphism-; Araquaia-Tocantins-Fold-belt; fold-belts; South-America; suture-zones; Paleozoic-; Parnaiba-Basin; Brazilian-Cycle; grade-; cratons-; Amazonian-Craton; Jequie-Cycle; Transamazonian-Cycle; granites-; Goias-; Baixo-Araquaia-Supergroup; amphibolites-; schists-; phyllites-; metalimestone-; metasedimentary-rocks; Colmeia-Complex; kyanite-; nesosilicates-; orthosilicates-; silicates-; sillimanite-

Özler / Abstracts

J.D.A. Piper, Joanna M. Moore, O. Tatar, H. Gursoy and R.G. Park, 1996, *Paleomagmatic study of crustal deformation across an intracontinental transform: the North Anatolian Fault Zone in North Turkey*: Geol. Soci. Special Publ., 105, 299-310.

Abstract: Eocene volcanic rocks spanning the North Anatolian Fault Zone in north central Turkey have a common reversed polarity and appear to record a short term volcanic episode useful for identifiying subsequent tectonic rotations. Althouh regional differences are present, no distrubuted clockwise rotation caused by dexrtal motion across the fault zone since mid-Miocene times are found. Instead variable anticlockwise block rotartion demonstarated that this fault system does not obey theoretical models for crustal behaviour across continental transforms. Deformation is found to be highly inhomogeneous with a narrow zone of intense clockwise rotation recognised within blocks bounded by strike-slip fault above, and parallel to, the foundamental lineament. Further from the lineament no systematic rotations with respect to the major bounding plates are detected. A zone of c. 30° anticlokewise rotation in the east may be either a consequence of emplacement of the Pontides or an ongoing consequence of continental collesion. Slightly larger rotation south of the fault probably record block rotation south into Anatolian as this region is being extruded westwards by continuing impingement of Afro-Arabia into the Eurasian Plate.

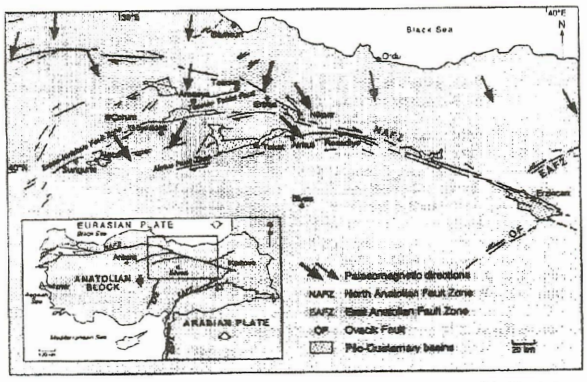

Fig. 1. The major tectonic divisions and distribution of major lineaments in Anatolia and adjacent regions. The large open arrows show relative motions of the plates and the smaller half arrows are directions of movement on major strike-slip faults.

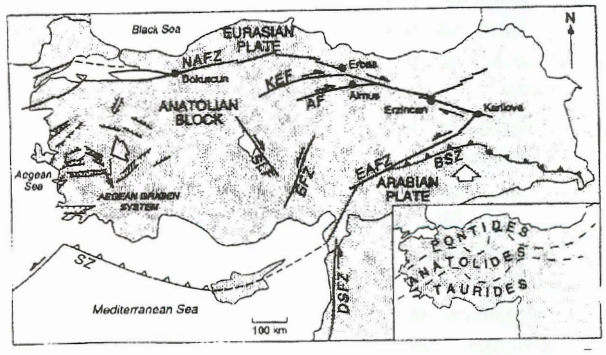

Fig. 2. Distribution of paleomagnetic sampling sites of this study in the central part of the North Anatolian Fault Zone; the distribution of major faults in this region is also shown. The locations of previous paleomagnetic studies shown by the stars are referred to in the text. The inset shows the regional location within the tectonic framework of the Eastern Mediterrenean.

Bora Rojay, 1995, *Port-Triassic Evolution Of Central Pontides: Evidence from Amasya Region, Northern Anatolia:* Geologica Romana, 31, 329-350.

Abstract: The central Pontides is an orogenic belt evolved since Triassic by the progressive closure of Paleo- and Neo-Tethys ocean, which is bounded by the Izmir-Ankara-Erzincan Suture (Northern Neotethyan Suture) from the south.

The post-Triassic Neo-Tethyan evolution in Amasya region started with Liassic transgression on the rifted pre-Liassic basement rocks. Later, the initial rifting failed and the platform was uplifted. The Uplifted platform turned into an open-marine depositional realm as recorded by the deposition of Callovian Ammonitico Rosso facies. The open-marine to deep sea deposition period was followed by a regressive platform carbonate deposition during Cenomanian deep-sea pelagics and turbidites. The passive margine was already destructed and turned into an active continental margine as a result of northward subduction of northern branch of the Neo-Tethyan oceanic crust during post-Cenomanian - pre-Campanian interval. Thermal doming beneath the future magmatic arc to the north and tectonic transportion of mobile accretionary prism towards south, resulted in the development of constructive forearc basin during mid Campanian-Maestrichtian. Ongoing emergence in the Amasya region and the cumulative amalgamation of the accretionary prism were followed by a newly arising extensional regime during Lutetian. The retrochariage of accreted melange onto Lutetian peripheral passive rift basin units from

south to north, was followed by the dacitic intrusion which were probably the result of thickening of continental crust in the region. The entire region emerged under the control of a N-S directed compressional contractional regime until the initiation of compressional-extansional tectonic regime (North Anatolian Fault System).

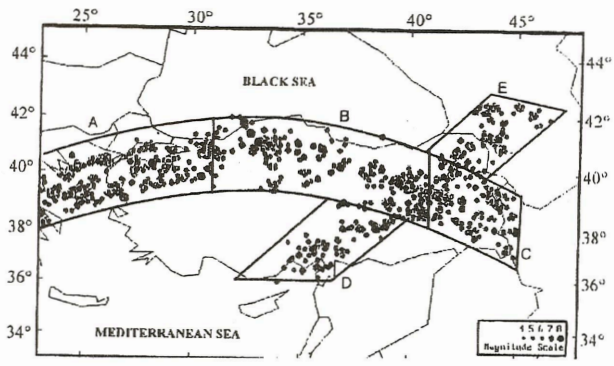

Fig. 2. Simplified tectonostratigraphic columnar section of the Amasya Region. NAOM. North Anatolian Ophiolithic Melange, DC. Devecidag Complex (Modified from Rajoy, 1993).

Ali Osman Öncel, Ian Main, Ömer Alptekin, Patience Cowie, 1996, *Spatial variations of the fractal properties of seismicty in the Anatolian fault zones:* Tectonophysics, 257, 189-202.

Abstract: The Anatolian fault zones are seismically active strice-slipe fault zones transcending the Anatolian plate in E-W and N-S directions. We investigate the spatial variations of seismicity along these zones in an attempt to investigate fault complexity along strice, quantified by the Gutenberg-Richter b-value and the fractal (correlation) dimension of earthquake epicentres, using the maximum likelihood method and the correlation integral, respectively. The investigation covers instrumentally recorded earthquakes of magnitude M>4.5 occurring between 1900 and 1992. We find systematic spatial variations which may be related to structural or mechanical variability along strike. In particular the large change in strike at the northern apex of the North Anatolian Fault Zone is associated with the highest correlation dimension and lowest b-value for seismicity this century. The correlation dimension and b-value show a negative correlation with respect to each other, similar to results reported in other regional studies of japon and southern California. This statistical correlation is stronger when more objective seismic zoning is carried out (based on number of events) rather than more subjective seismotectonic zoning in common use in seismic hazard analysis.

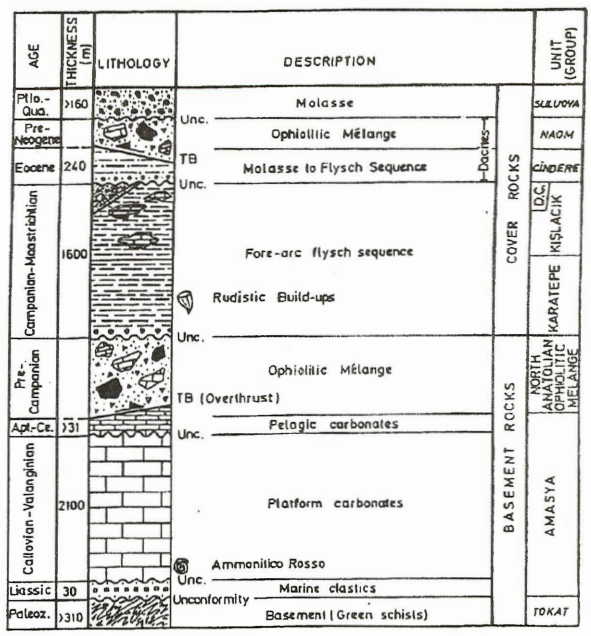

Fig. 2. Map showing the epicentre distribution of earthquakes which occured between 1900 and 1992 in Turkey. The data are split into five sismotectonic zones, labelled A-E. Justtification for this structral zonning are given in the main text, section 3.

Sempozyum, Seminer, Konferans

GEOENV '97 ULUSLARARASI JEOLOJİ VE ÇEVRE SEMPOZYUMU 1-5 EYLÜL 1997, İSTANBUL

Türkiye Mühendislik ve Mimarlık Odaları Birliği Jeoloji Mühendisliği Odası, 50. Jeoloji Kongresi 'ni 1-5 Eylül 1997 tarihleri arasında İstanbul 'da Uluslararası Jeoloji ve Çevre Sempozyumu kapsamında yapacaktır. Sempozyum Cumhurbaşkanı Sayın Süleyman Demirel tarafından başlatılacaktır.

İkinci Duyuru sempozyum programı, sosyal aktiviteler, teknik geziler ve sempozyum sonrası kısa seyahatleri kapsayan bilgileri içermektedir.

Sempozyum etkinlikleri ile ilgili detay bilgiler Sempozyum Sekreterleri İ.Yılmazer ve C. Saraç'tan temin edilebilir.

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Bayındır Sok. 7/1 Yenişehir 06410, Ankara
Tel : 435 07 17 **Fax :** 434 23 88
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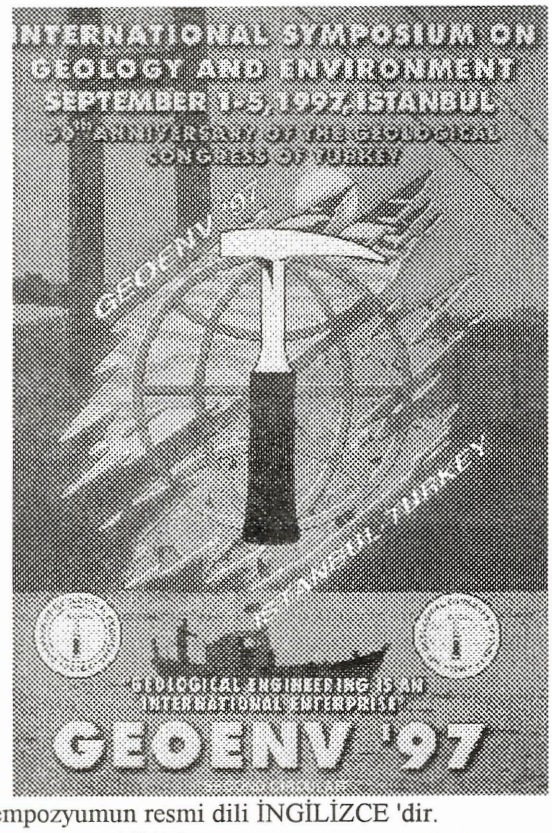

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Sempozyum bildiri ve poster sunumu şeklinde organize edilecektir. Sempozyuma katılmak isteyenler anabaşlıklar altında verilen adreslere bildiri özlerini ve özgeçmişlerini gönderebilirler. Kabul edilen bildiriler tüm metin halinde özel beş ayrı sette yayınlanacak ve Science Citation Index 'de bildiri özleri olarak yer alacaktır.
Sempozyumda ele alınacak anabaşlıklar ve içerikleri aşağıda verilmektedir.

1. ÇEVRESEL JEOLOJİ, JEOFİZİK VE JEOKİMYA

1.1. Çevresel Jeoloji

R.L. Brenner
Department of Geology, The University of Lowa, Lowa City, Lowa, 52242, USA
Tel : 1-319-355-1818 **Fax :** 1-319-355-1821

İnsanoğlunun varlığı doğal kaynaklara bağlıdır. Deprem, sel, fırtına, volkanik etkiler ve yerkaymaları gibi jeolojik süreçler doğal felaketlerdir. Felakete yol açan jeolojik süreçlerinin etkilerinin hafifletilmesi ve doğal kaynakların araştırılması, üretimi, taşınması ve doğal kaynakların tüketimi konularında görüşlere yer verilecektir.

1.2. Çevresel Jeofizik

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Department of Geology, University of Leicester, Leicester LE1 7RH, UK.
Tel : 44-116-252-3628 **Fax :** 44-116-252-3918
Yüzey, kuyu ve jeofizik tekniklerinin uygulamaları ile çevresel problemler üzerinde yoğunlaşmıştır. Doğal kirlilikler ve atık depolama alanlarının araştırılması ve yeraltı suyu kaynakları ve akiferlerin tesbiti, yeraltı suyunun haritalanması gibi alt konu başlıklarını içermektedir.

1.3. Çevresel Jeokimya

A.Kılınç
Department of Geology, University of Cincinnati, Cincinnati, Ohio, 45221-0013, USA
Tel: 1-513-556-3732 **Fax:** 1-513-556-6931
Çevresel jeokimya geniş bir yelpaze içinde kimyasal süreçlerin etkilendiği çevre ile ilgilenmektedir. Jeokimyasal modelleme, izotop jeokimyası, jeomikrobiyoloji, volkanik gazın çevre etkisinin jeokimyasal ve organik jeokimya ve paleoçevre konuları yeralmaktadır. Bununla birlikte, iki yeni başlık ise, "21. yüzyılda çevresel jeokimya eğitimi" ve "Çevresel düzenlemesinde jeokimyasal boyutlar" konularındaki görüşler çevresel jeokimya bölümüne ilave edilmiştir.

1.4. Su-Kayaç Etkileşimi

U.Dogan
Department of Geological Engineering, Ankara University, 06100, Ankara, TURKEY or Department of Geology, The University of Lowa, Lowa City, Lowa, 52242, USA
Tel: 90-312-235-2979 **Fax:** 90-312-235-2979 1-319-335-1821
Su-kayaç etklieşimi oldukça düşük sıcaklıklardaki sularda, sıvı ve mineral etkileşimi şeklindedir. Jeologlar, organik ve inorganik jeokimyacılar, kimyacılar, hidrojeologlar, toprak bilimciler, kil mineralojistleri, elektron mikroskop çalışanlar ve diğer bilim dallarıyla ilgilenenler karmaşık ve birçok bileşenli reaksiyonlarda kütle transferi, reaksiyon kinetiği, katı çözelti arayüzey kimyası, hidrotermal akış reaksiyonu, diyajenetik reaksiyonlar ve su-kayaç veya

sıvı mineral etkileşimi konularında görüşler belirtecektir.

1.5. Uzaktan Algılama ve Çevre

A. Sesören
İstanbul Mühendislik Ltd. 2. Arsu Apt. 7/35, Akatlar 80630, İstanbul, TURKEY.
Tel: 90-212-275-5549 **Fax:** 90-212-257-1369

Üç ana konu başlığı sunulacaktır.

1. Haritalama
   - deniz kıyısı, sahil, göl, akarsu, gölet alanları,
   - orman, otlak, çalılık gibi yeşil bitki örtüsü,
   - ekilebilir alanlar, dağlık bölgeler, bataklıklar,
   - endüstriyel bölgeler ve
   - diğerleri
2. Çevresel sorunların belirlenmesi,
   - deniz, göl, akarsu, hava kirliliği
   - erozyon, sel, toprak kaymaları gibi doğal afetler,
   - kanuna aykırı inşaatların belirlenmesi,
3. Çevresel zenginliklerin devamlı kontrolü
   - çevresel zenginliklerin devamlı kontrol gerekmeden korunamaması,
   - Yer yüzü doğası ve insanlar tarafından oluşturulan yapılar hakkında bilgi sağlamak amacı ile sürekli kontrollerin uzaktan algılama yöntemi ile elde edilmesi.

2. ÇEVRESEL BİLİM VE TEKNOLOJİ

2.1. Mühendislik Jeolojisi ve Çevre

E. Yüzer
Department of Geological Engineering, Mining Faculty, İstanbul Tecnical University Ayazağa, İstanbul, 80626, TURKEY
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"Çevre Mühendisliği" terimi 1970 'li yılların başında ortaya çıkmış ve mühendislik eğitim programında son yıllarda yeralmıştır. "Mühendislik ve Çevre" yerkabuğundan, tıp bilmine kadar birçok alanla ilişkilidir. Mühendislik planları, kavramları, dizaynı ve uygulamalı konularda çalışanlar bu alt başlıkta değerlendirilecektir. Konular şu başlıklarda yoğunlaşmaktadır.

- Çeşitli metod ve uygulamalar,
- Mühendislik ve çevre konularında öneriler,
- Mühendislik ve çevre uygulamalarında ilerlemenin sağlanması,
- Bilim adamları, teknikerler ve endüstride çalışanlar arasında ilişkilerin sağlanması.

2.2. Kent Jeolojisi ve Çevre Planlaması

P.Marinos
Faculty of Civil Engineering, Geotechnical Department, National Tecnical University of Athens, 106 82 Athens, GREECE
Tel: 30-1-3813-900 **Fax:** 30-1-3813-900

Jeoloji, kent planlaması ve dizaynında önemli rol oynamaktadır. Yerleşim yerlerine duyulan ihtiyacın artması, yerleşim yeri seçiminde farklı alanların kullanılması gerekliliğini ortaya çıkarmaktadır. Erozyon, yer kayması, heyelan, sel baskını ve deprem gibi doğal yer hareketleri, yerleşim yerleri seçiminde göz önüne alınması gereken durumlardır. Problem kentleşmenin gelişimi ile ilşkilidir. Kentleşmenin gelişimi için detay haritalamalar ve özel teknikler gerekmektedir. Yeraltı suyunun yerleşim yerleri üzerinde ve şehirlerin yeraltı suyu üzerindeki etkisi değişkendir. Bugün yapılan çalışmalarla şehirlerin ve çevresinin haritalanması jeologlar tarafından yapmakta ve çevre plancılığına katkıda bulunulmaktadır.

2.3. Doğal Enerji ve Çevre

M. Hayashi
Kyushu Sangyo University, 1-2-3 Matsugadai, Fukuoka 813, JAPAN
Tel: 81-92-673-5883 **Fax:** 81-92-673-5899

Bu bölüm doğal enerji kaynaklarının ve çevrenin incelenmesi, gelişmi ve üretimi ile ilgilidir. Ana tema, jeotermal enerjinin bilimsel ve teknolojik problemleri üzerinde yoğunlaşmaktadır. Ancak fosil yakıtlar, rüzgar etkisi, gel-git gücü, dalga-enerjisi, okyanus-termal enerjisi, güneş enerjisi, su gücü konuları da bu bölüm altında ele alınacaktır.

2.4. Madencilik ve Çevre

A.D. Paktunç
Mineral Science Laboratories, Canada Centre for Mineral and Energy Tecnology, 555 Booth Street, Ottawa K1A 0G1, CANADA
Tel: 1-613-947-7061 **Fax:** 1-613-996-9673

Bu konu başlığı altında, madencilik ve çevredeki yeni gelişmeler üzerinde durulacaktır. Madencilikte pasa ve atık kayaların saha ve laboratuvar çalışmaları, asit kayaçların üzerinde kimyasal ve matematiksel metodlar. Çevrenin madencilik faaliyetleri ile kirlenmesinin önlenmesi ve kirlilik kontrolü üzerindeki yeni teknoloji ve uygulamaların bu sorunlar gündeme getirilecektir.

2.5. Jeolojik ve Tarihi Eserlerin Korunması

L. Lazzarini
Laboratorio di Analisi Dei Materiali Antichi, Dipartimento di Storia dell' Architettura (I.U.A.V.) S. Polo 2554-1-30125 Venezzia, ITALY.
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Sosyaloji, politika ve ekonomi ile ilgili, ülkeler için önemli tarihi ve kültürel mirasın korunması konu alınmıştır.

Geçmişte yapı malzemesi kaya veya biriket ve kil, kireçtaşı ve jips gibi doğal ürünlerden sağlanmaktaydı.

Jeoloji ve ilişkili bilimler bu materyallerin bilinmesi için temel katkıda bulunmaktadır.
Bu konu başlığı altında, eskiden kullanılan materyaller ve bunların kaynaklarının saptanması, bozulma nedenleri ve mekanizmaları ve eserlerin korunması için materyal ve metodların geliştirilmesi için jeoloji bilimi (jeoloji, mühendislik jeolojisi, petrografi, jeokimya vb.) katkı sağlayacaktır.

2.6. Minerallerin biyoişlevi

N.Kuyucak
Water and Earth Science Associates Ltd., Box 430, Carp, Ontario, K0A 1L0, CANADA
Tel: 1-613-839-3053 **Fax:** 1-613-839-5376

Günümüzde çevre ve ekonomik ihtiyaçlar, ürün ve geri dönümlü mineral ve atıklar yeni tekniklerin ve mineral endüstrisinin doğmasına neden olmuştur. Mineralleri filtreleme ve fosil yakıt bölgelerindeki biyoteknoloji ticari duruma ulaşmıştır. Ticari tecrübe ve bilgi akımı, biyo-işlevlerin uygulanma risklerini aza indirmektedir.

3. ÇEVRE KİRLİLİĞİ

3.1. Hava Kirliliği

K. Curi
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Hava kirliliği gelişmiş bazı ülkelerde çok önemli sağlık problemlerine yol açmaktadır. Bununla birlikte, çevre kirliliğine de yol açmaktadır. Bu problemler farklı başlıklar altında ele alınacaktır. Esas olarak kirliliğin yayılımı ve önlenmesine yönelik çalışmalara yer verilecektir.

3.2. Yüzey Suyu Kirliliği

H. Hoetzl
Department of Applied Geology, Karsruhe University, Kaiserstr, 12, D-76128, Karlruhe, GERMANY
Tel: 49-721-608-3096 **Fax:**49-721-606-279

Yaşadığımız ekosistem içindeki yüzey suyu (göller, nehirler vb.) birçok tehlikelere maruz kalmaktadır. Su kalitesi biyolojik etkilerce ve kanalizasyonlarla değişir. Kirlenmenin esas kaynağı endüstri ve yerel yönetim kanalizasyon sistemlerinde işlemden geçirilmiş ve geçirilmemiş atıklardır. Doğal sistemdeki kirlilik limitlerinin göstergesi olan atıkları mümkün olduğunca saflaştırmak gereklidir. Yüzey suyu kirliliği, ekosistemin (yeraltı suyu, sedimanlar) diğer bölümlerine de etki eder. Nehir ve göllerdeki sedimanlar kirlenmiş çökeller için yeni riskler ve gelecekteki kirlenmeler için kaynak oluşturmaktadır.

3.3. Yeraltısuyu kirliliği

A. Pekdeğer
Freie Universitat Berlin, FRR Rosttroff ve Umweltgeologie, Malteserstr, 74-100, D-12249, Germany
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Bu bölümde yeraltısuyu kirliliğine değinilecektir. Organik ve inorganik kirlenmelerin taşınabilmesi ve yerdeğiştirmesi ve kirlilik taşınma modellemesi incelenecektir. Doygun ve doygun olamayan zonlarda kirlenme taşınmasının en önemli faktörüdür. Yeraltı suyunun korunmasında ve öneminde teorik ve pratik bilgiler önemli olacaktır.

3.4. Denizel Kirlenme

V. Yanko
Institute for Nature Conservation Research, Faculty of Life Science, Tel Aviv University, Tel Aviv 69978, ISRAEL
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Bu bölüm endüstriyel ve yerel atıklar tarafından deniz ortamının kirlenmesi üzerine odaklanmıştır. Denizel ortamın jeokimyasal, biyokimyasal, fiziksel, oşinografik, mineralojik, sedimantolojik ve biyolojik özellikleri, kirlilik dağılımı (örnegin, ağır metal, PAH (s), bakteriler, atık külleri, hampetrol, deterjan ve gübreler) özellikle kirliliğe neden olmaktadır. Bu başlık altında tartışılacak konular aşağıda verilmektedir.
- Denizel sulardaki kirlilik birikiminin kimyasal süreçleri
- Foto- ve zooplanktonlarla kirlilik birikimi
- Foto- ve zooplanktonların uzaktan algılama metoduyla kontrolü ve kirlilik yayılımı
- Su çevrimi ve sedimanların taşınması ve kirliliği
- Minerallerin tutucu özellikleri
- Sedimanlardaki kirlilik sorunları, kirlenmenin jeokronolojisi
- Kirlilik izlenmesinin anlamı ve yeni metodlar.

3.5. Tarım ve Toprak Kirlenmesi

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Tarımsal etkinlikler sonucunda çevresel kirlenmenin çeşitli yönleri tartışılacaktır. Tarımsal etkinlikten doğan toprak erozyonu gibi fiziksel kirlenmeler, gübreleme ile meydana gelen kimyasal, hayvansal atıklarla oluşan biyolojik kirlenmeler gibi konuları kapsayan araştırmalar, özellikle kirlilik izlenmesi ve tayini, modelleme, önlenme yolları, kontrollü bir şekilde yasal uygulamaları kapsamaktadır.

3.6. Radyoaktif Atıkların Depolanması

N.Chapman
QuantiSci Ltd/University of Sheffield, Melton Mowbray, Leicestershire LE13 1AF, UK
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Bu bölüm uzun zamanlar radyoaktif atık olarak kullanılan jeolojik oluşumlar üzerine odaklanmıştır. Özellikle, yer seçimindeki karakteristik teknikler, yeraltı araştırma laboratuvarları ve kayaç karakteristiği tesisleri, yeraltı suyu modellemesi ve farklı jeolojik oluşumlarda kirliliğin taşınması, zamana bağlı iklim etkilerinin hesaplanması ve yeraltı sularındaki jeolojik oluşumlar ve kayaç gerilim sistemleri, hidrokimyasal tanımlamalar ve paleohidroloji ve jeolojik verilerin radyolojik güvenliği konuları tartışılacaktır .

4. ÇEVRE SAĞLIĞI, YÖNETİMİ, POLİTİKASI VE KANUNLAR

4.1. Çevre ve Sağlık

R.Wallace
Preventive Medicine and Internal Medicine, Cancer Center, University of lowa, lowa City, lowa 52242-1009, USA

Bu bölümde, fiziksel çevrenin insanlarda görülen kanser hastalıklarının bir nedeni olduğu dikkat çekilmektedir. Özellikle jeolojik yapılar üzerinde yürütülen çalışmalarla bu hastalıklara maruz kalan kişilerde kanser oluşum riskleri anlatılacaktır. Bununla birlikte, hem yeni araştırma programları hem de kanserin önlenmesinde yeni metodlardan bahsedilecektir. Soluma ile bünyeye alınan mineraller ve kanser riskilerinin hangi jeolojik formasyonlarla ilişkili olduğu tartışılacaktır.

4.2. İlaç Sanayii ve Çevre

M. Çelik
Department of Pharmaceutics, College of Pharmacy, The State University of New Jersey RUTGERS, Piscataway, New Jersey, 08855-0789, USA.
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Son 30 senedir düşünülen ilerleme, ilaç üretiminin gelişimi ve imalinin çevreye etkilerinin anlaşılmasına harcanmıştır. Çevreyi kirleten bazı kirlilik faktörleri vardır. "İlaç sanayi ve çevre" başlığı altında bu kritik faktörlerden bazıları (kaplama, paketleme maddeleri ve kimyasal materyalin rolü gibi) tartışılacaktır.

4.3. Çevre Yönetimi

A. Robertson
Robertson Geoconsultants Inc., Suite 902, 580 Hornby Street, Vancouver, B.C., V6C 3B6 CANADA
Tel: 1-604-684-8072 **Fax:** 1-604-681-4166

Çevresel faktörler ve sorumluluklar, mineral kaynaklarının araştırılmasındaki en büyük ilgi ve harcamaları oluşturmaktadır. Harcamalar sadece doğrudan çevre koruması, temizliği ve düzenlenmesi ile ilgili değildir. Bunların yanısıra potansiyel çevre etkilerinin araştırılması, ruhsat verilmesi, düzen kontrolü, izleme ve araştırıcı ilişkileri ve finans sektörü ile bağların kurulması önemlidir. Risk yönetimi, mineral ve maden araştırma projeleriyle aynı zamanda başlatılmıştır. Gelecekte, çevresel etki yaratan projeler elenerek düzenlemeler getirilecektir. Böylece "Kapama dizaynı" adında bir kavram doğmuştur. Bu bölüm çevre yönetimi, riskleri ve sorumluluklarını kapsamaktadır.

4.4. Çevresel Politika ve kanunlar

A.I. Johuson
AIJ Inc., Water and Soil Engineering Consulting, 7474 Upham Court, Arvada, Colorado 80003 USA
Tel: 1-303-425-5610 **Fax:** 1-303-425-5610

"Çevre Politikası ve Kanunlar" sempozyum programının önemli bölümlerinden biri olacaktır. Günümüzde ve gelecekteki düzenlemeler ve kanunlara bağlı düşüncelerin, katı düzenlemeleri ve konuların geliştirilmesi ve su, toprak, tarım ve insan ile diğer yaşayan canlıların çevresel yönünün ülke ekonomisine sağladığı endüstriyen gelişimin önemi belirtilecektir.

4.5. Su Kaynaklarının Korunması

W.P. Balderer
Engineering Geology, Geological Institute, Federal Institute of Technology, ETH-Zurich/Honggerberg, CH 8093, Zurich, SWITZERLAND
Tel: 41-1-633-2743 **Fax:** 41-1-633-1108

Yeraltı suyu yönetiminin kantitatif yönü, deniz suyu girişimi, hidrolik boşlukların azaltılması ile işletilebilmektedir. Yeraltı suyunun kirlenmesi, su çevrimi ile sağlanmaktadır.

- atmosferik emisyonun kontrolü
- yeraltı su kaynaklarının korunması, korunan alanların yönetimi ve kirlilik risklerinin kontrolü
- İçme suyu sağlanması, sulama ve jeotermal enerjinin üretilmesi gibi diğer aktiviteler su kaynaklarının işletilmesi için önemlidir. Gelecekte yürütülecek çalışmalar yeraltı su kalitesinin ve miktarının için teknik modellemeleri getirecektir.

4.6. Çevresel-Simulasyon

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İnsanları yaşadığı çevre, çevresel, jeokimyasal, biyolojik çevrenin değişik süreçlerinin anlaşılması hakkındaki temel sorunlarla karşılaşmaktadır. Toksik

maddeler, yukarıda isimleri açıklanan ortamlarda yaygındır. Bununla birlikte, bilimadamları çevrenin bir bütün olarak düşünülmesini ve bilim ve düzenleyici uygulamaların, multimedya ve intermedya yolları arasındaki karmaşık etkileşimin beraber olası görüşünü benimsemişlerdir. Çevrede açığa çıkan kirlilik, karmaşık fiziksel, kimyasal ve biyolojik süreçler sonucu olarak hava, su, toprak, bitkilendirme gibi bazı çevresel ortamlarda dağılmış olduğunu ve böylece çevresel kirliliğin mutimedya problemle birlikte vergi kapsamına alınması gerekmektedir. Ortamdaki kirliliğin taşınması ve biriktirilmesi çok dikkatli olarak düşünülmeli ve değerlendirilmelidir. Bu bölümde bu karmaşık karakteristik problemler simulasyon tekniği ile açıklanmaya çalışılacaktır.

5. YÜZEY VE YÜZEYE YAKIN BİLİMLER VE TEKNOLOJİLERİ

5.1. Yüzey mikroskopisi ve mikroanaliz

R. Avcı
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Materyallerin yüzeyleri, kütlesi, fiziksel özellikleri ve kimyasal reaksiyonlarla meydana gelecek durumları farklıdır. Birçok kimyasal reaksiyon, yüzeyin en üst tabakasında (0-50A) moleküler veya atomlar tarafından kuşatılmaktadır. Materyalin toplam kütlesinden türeyerek meydana gelen korezyon gibi tüm kimyasal ve biyolojik reaksiyonlar materyalin yüzeyinde başlamaktadır.

Bu toplantı süresince hassas yüzey analizleri ihtiyaç duyulan birçok konu tartışılacaktır. Biyofilm ve bunların yüzeyle olan etkileşimleri, kayaç iz element analizleri, toprak ve bitkiler konusundaki problemlerle ilgili araştırıcılara çağrıda bulunulmaktadır. Esas konu hassas yüzey analizlerinin ve bunların çevresel ve jeoloji ile olan ilgileri hakkındaki problemlere uygulamalı çözümler getirmektir. Bu konu ile ilgili teknikler (belli bir sınırlama yoktur) küçük-spot-x-ışınları, fotoelektron spektoskopi, taramalı Auger elektron spektroscopy, imaging time-to-flighgt secondary ion mas spectroskopi ve atomik force microskopi analizlerine yer verilecektir.

5.2. Taramalı Elektron Mikroskopi ve Mikroanaliz

D. Joy
Department of Biochemistry and Cellular and Molecular Biology, College of Arts and Sciences, Division of Biology, The University of Tennessee, Knoxville, Tennesssee 37996-0830 USA
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Taramalı elektron mikroskopi ve mikroanalizler, çevre biliminde özel bir konuma sahiptir. Sempozyumda bu başlık altında sunulacak konular

- çevresel taramalı mikroskopi
- düşük vakumlu sistemlerde mikroanaliz
- düşük voltajlı taramalı mikroskopi ve mikroanaliz
- araştırma ve öğrenme amaçlı bilgisayar kontrollü SEM 'ler
- elektron ışınlı aletlerin kullanımı, pratik uygulamalar ve problemlere çözüm bulmak amaçlanmaktadır.

5.3. Transmission Elektron Mikroskopi ve Mikroanalizler

S.Seraphin
Department of materials of Science and Engineering, The University of Arizona, Tucson, Arizona 85721 USA
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Konular, transmission ve scanning-transmission elektron mikroskopi, convergent-beam electron diffraction, selected-area elektron difraction, x-ışınları spektroskopi ve elektron energy loss spectroskopisinin jeoloji ve çevre bilimlerinde uygulanabilirliğidir. Materyallerin yapısal ve kompozisyonal parametrelerinin mikroanaliz teknikleri ile uygulanabilirliği bu bölümün genel konusunu teşkil etmektedir.

5.4. Materyaller ve Laser Confocal Light Microscopi ile Biyomedikal Uygulamalar

K.C. Moore
Central Microscopy Research Facility, The University of lowa, lowa city, lowa 52242-1101 USA.
Tel: 1-319-335-8142 **Fax:** 1-319-335-8049

Araştırıcıların sunacağı konular, Laser Scanning ve Disc Scanning Confocal Microscopy yöntemleri, tarihsel perspektif ve teorilerle birlikte genel bilgileri kapsayacaktır. Bu yeni teknolojilerin yaygın olarak uygulama alanı Lazerli Taramalı Confocal Mikroskopi (LSCM) ve bunların biyoloji ve eczacılığa uygulanmasıdır. Bununla birlikte, LSCM 'nin kullanılmasının daha iyi anlaşılması için günümüz jeolojik materyalleri kapsayan materyal bilimciler tarafından artan kullanım alanları konu alınmaktadır. Disc Scanning Confocal Microscopi (DSCM) yaklaşık 20 yıldan beri LSCM olarak materyaller için uygulanmaktadır.

5.5. İmaj Analizleri

J.K. Beddow
Department of Chemical and Biochemical Engineerin, The University of lowa, lowa City, lowa 52242 USA.

Tel: 1-319-337-2474 **Fax:** 1-319-337-2474
Konular, optik veya elektron imaj veya bu konularla ilgili kullanılan veya gelişmiş imaj analiz metodları hakkındadır. Konular aşağıdaki kapsam içindedir;
- Ölçülebilir imaj özelliklerinin teorik görünümleri,
- Sedimanter çökellerin davranışları,
- Jeolojik kesitlerin hazırlanmasında mikro-yapısal analizler,
- Fotograf veya dijital imajlardaki özelliklerin imaj analizleriyle, uzay veya yüksek bölgelerden alınması.

PANELLER

Gelecekteki Çevre

G.Teutsch
Geologisches Instute, Universtaet Tuebningen, Sigwarstr, 10, Tubingen, 72076, GERMANY
Tel: 49-7071-296-468 **Fax:** 49-7071-5059
Panel konuları, çevrenin korunması ve çevre kirliliğinin önlenmesi üzerine yapılacak olan sunumları ve yerbilimleri açısından tatışmaları kapsayacaktır. Sunumlar aşağıdaki başlıklar altında yapılacaktır.
- İnsanoğlunun yarattığı kirliliklerin tanzim edilmesi, riskleri ve teknolojileri
- toprak ve yeraltı suyunun korunması, sınırlanması ve perspektifi
- su ve hava kirliliği, izlenmesi ve anlaşılması,
- çevresel standartlar

2000 'li Yıllarda Yerbilimlerinde Eğitim

M. Doğan
Depatrment og Geological Engineering, Hacettepe University, Ankara, TÜRKİYE
Tel: 90-312-235-2979 **Fax:** 90-312-235-2979
Panel, üniversitelerin 2000 'li yıllardaki jeoloji eğitimi ile ilgili yerbilimleri, yaşam bilmleri, mühendislik, hukuk ve politika gibi birbiriyle ilişkili dallarda bilimsel konular birlikte ve çevre bilimleri gibi yeni programları kapsamaktadır.

Yuvarlak Masa Toplantısı
Üniversite-Endüstri Etkileşimi

K.C. Moore
Central Microscopy Research Facility, The University of lowa, lowa city, lowa 52242-1101 USA.
Tel: 1-319-335-8142 **Fax:** 1-319-335-8049

KISA KURSLAR

S-1. Asit-Maden Drenajı

N.Kuyucak
Water and Earth Science Associates Ltd., Box 430, Carp, Ontario, K0A IL0, CANADA
Tel: 1-613-839-3053 **Fax:** 1-613-839-5376
Madenciliğin çevreye olan etkileri, asit madenciliği, drenajı (AMD), sülfit mineral artıklarının oksidasyonu, madencilik endüstrisi konuları işlecektir.

S-2. Toprak Kaymaları ve Çevre İle İlişkisi

M.E. Popescu
Department of Soil Mechanics and Foundation Engineering, University of Civil Engineering, P.O. Box: 2-45, 78172, Bucharest 2, ROMANIA
Tel: 40-1-657-2375 **Fax:** 40-1-312-2720
Toprak kaymaları doğal veya suni' materyallerin aşağılara doğru kayma ve yerdeğiştirmesi ile ilgili işlevler olarak kullanılır. Düşme, akma ve kayma gibi üç esas mekanizma vardır.
Toprak kaymaları maddi ve manevi kayıplara neden olmakta ve şehir gelişimi ve bölgesel kullanımlarda değişiklik yaratan bir problemdir.
Bunların etkilerinin ölçülmesi, aşağıda detaylıca verilen jeomorfolojik, hidrojeolojik ve jeoteknik özelliklerin planlanarak esas mekanizmaları ve neden olduğu faktörlere bağlıdır.
Kurs kapsamında, mühendislik jeolojisi, jeoloji, jeoteknik mühendisliği ve jeomorfoloji konularında çalışanlara yeni veya oluştuğu bilinen özellikler hakkında bilgi verilecek, toprak kaymalarının kontrolü ve önlenmesi tartışılacaktır.

S-3. Çevre Bilimleri ve Teknolojisindeki Elektron Mikroskobu teknikleri

D.Joy*, K.C. Moore, U. Doğan and S. Seraphin
*Department of Biochemistry and Cellular and Molecular Biology, College of Arts and Sciences, Division of Biology, University of Tennessee, Knoxville, Tennessee 37996-830 USA.
Tel: 1-423-974-5158 **Fax:** 1-423-974-6306
Kurs kapsamındaki konular;
- Elektron mikroskobunun temel teorisi
- SEM ve TEM 'in pratik kullanımı
- dijital görüntüleme, görüntü analizi ve teknolojisi
- SEM ve TEM 'deki mikroanalizlerdir (EDS ve WDS).

S-4. İmaj Analizlerinde Yeni Strateji ve Taktikler

J.K.Beddow
Department of Chemical and Biochemical Engineering, The University of lowa, lowa City, lowa 52242, USA
Tel: 1-319-337-2474 **Fax:** 1-319-337-2474
Ticari imaj analizleri rutin işlerde kullanılır. Bu kurs kapsamındaki 1-imaj analiz teorisi, 2-profiller, flaksler ve fiberler, 3-boyut, doku, mikroyapı ve yüzey hakkında bilgiler verilecektir.

S-5. Elektrik ve Elektro-manyetik Metodların Çevreye olan etkilere Uygulanması

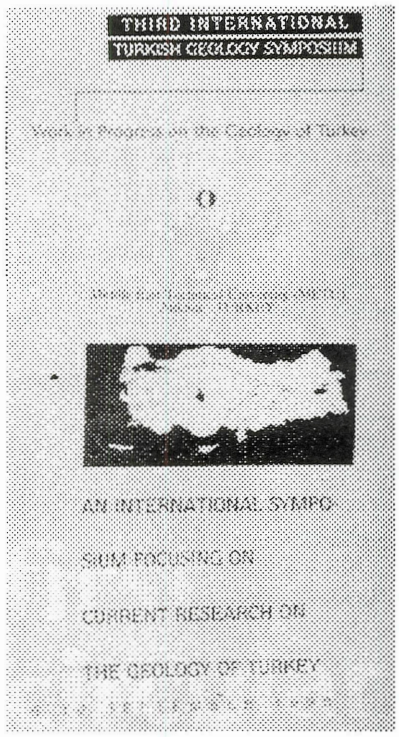
M.Meju

Department of Geology, University of Leicester, Leicester, LE1 7Rh UK
Tel: 44-116-252-3628 **Fax:** 44-116-252-3918
Yeraltı hakkındaki bilgiler jeofizik ölçümler ile anlaşılmaktadır. Bununla birlikte, elektrik ve elektro-manyetik yeraltı resistivite metodları, jeolojik ve çevresel araştırmalarda oldukça kullanılan bir metottur. Kursta, elektrik ve elekto-manyetik metodlarındaki yeni gelişmeler ve jeoloji ve antropolojik saptamalarda resistivite karakterleri, optimum yüzey planlaması, GEM ölçümlerinde uzaysal-zaman ilişkileri ve arazi verilerinin ayrımsal karakteri konuları ele alınacaktır.

S-6 İnternette Madencilik, Yerbilimleri ve Çevre MÜhendisliği
A.MacG. Robertson
Robertson Info-Data Inc., Creators of the INFO-MINE, #902 - 580 Hornby St., Vaancouver, B.C., V6C 3B6 CANADA
Tel: 1-604-684-6072 **Fax:** 1-604-681-4166
Kursla ilgili konular şu şekilde verilebilmektedir;
- Profosyonel iletişim
- İnternette uzaklık ve işbirliği
- teknoloji, servis ve yer seçimi
- maden, yerbilimleri ve çevresel yayınlar ve bilgi kaynakları
- maden, yerbilimleri ve çevresel bilgilerin internete geçirilmesi
- madencilik şirketleri veya çevre servislerinin organizasyonu vb.

THIRD INTERNATIONAL TURKISH GEOLOGY SYMPOSIUM

Middle East Tecnical University (METU) -Ankara
Konular:
-Paleo-tektonik (Geç Paleozoyik-Mesozoyik olaylar, sutur zonlar, Karakaya Problemi, riftler, basen oluşumu)
- Neotektonik (Türkiye 'nin ve komşu bölgelerin sismolojisi, Kuzey Anadolu Fay Zonu, Doğu Anadolu Fay Zonu, Batı Anadoluda sıkışma rejimi, Ege Bölgesi, Kuvaterner Jeolojisi, Basen dinamiği).
- Stratigrafi ve Paleontoloji (Karbonat platformu 'nun evrimi, Geç Paleozoyik, Tersiyer Evrimi, Stratigrafi birimleri, Uygulamalı paleontoloji, Deniz paleontolojisi).
- Sedimantoloji (mikrofasiyesler, diyajenez, sedimanter yapılar, paleoakıntı analizleri)
- Magmatizma (dalma-batma, çarpışma, gerilme ile ilişkili magmatizma ve ofiyolitler)
- Piroklastikler (yerdeğiştirme, tefrakronoloji)
- Çevre jeolojisi ve mühendislik uygulamaları (çevre kirliliğinin kimyasal boyutları, karst ve boşluklar, çevre jeolojisinin ilgi alanları, mühendislik jeolojisi, hidrojeoloji, şehir jeolojisi)
- Metamorfizma ve metamorfik kuşaklar (tektonik yerleşim, yeryüzüne yükselim)
- Mineral ve enerji kaynakları (metalik ve endüstriyel yataklar, kömür, petrol and jeotermal enerji)



- Uygulamalı mineraloji ve deneysel petroloji
- Uzaktan algılama ve jeolojide GIS uygulamaları
- Deniz jeolojisi
- Jeoarkeoloji

Kongreler
Bilimsel,
- Ankara melanjı
- Ankara bölgesinde yay-önü sekanslar
- Ankara melanjında Rosso Ammonitico fasiyesler
- Galatean volkanikler
- Ankara melanjında bentonit yatakların jeolojisi
- Boludağ tüneli: gezi yolu, ikili tüp otoyolu tüneli

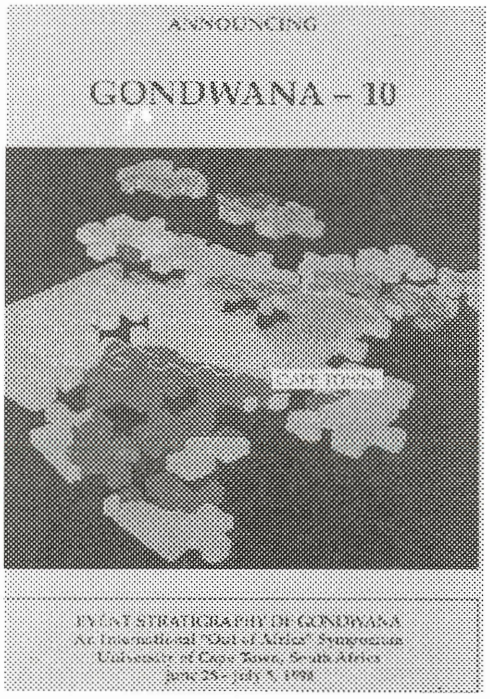
Sosyal,
- Hattuşaş (Hititlerin Başkenti)
- Gordiyon (Eski Firigya kenti)

Kongre Sonrası,
- Kuzey Anadolu Fay Zonu
- Kapadokya jeolojisi

- Karakaya kayaç toplulukları

Adres: Dr.Erdin Bozkurt
Organizing Secretary
Third International Turkish Geology Symposium
Department of Geological Engineering
Middle East Tecnical University
06531 Ankara, Türkiye

Sempozyum tarihi : 6-10 Eylül 1998



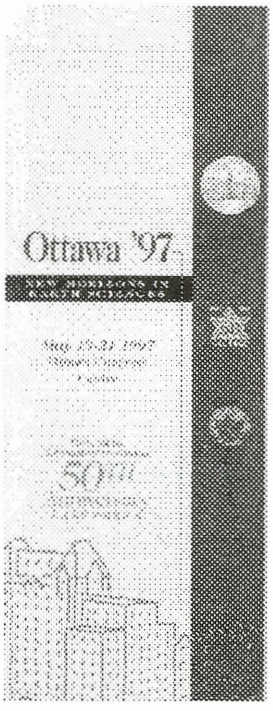
GONDWANA - 10
EVENT STRATIGRAPHY OF GONDWANA

Konular:

- Gondwana 'nın oluşumu ve Neo-Proterozoyik-Cambriyen 'deki olaylar
- Gondwana 'daki iklim değişiklikleri
- Gondwana karalarının gruplaşması
- Permo-Triyas sınırındaki global olaylar, global iklim değişiklikleri, superkıta 'nın özellikleri,
- Kretase-Tersiyer 'deki olaylar
- Gondwana 'nın iç bölümleri ve dış çizgisi etrafında gelişen magmatik, tektonotermal ve mineralleşme olayları
- Gondwana 'nın parçalanma ve fragmanlara ayrılma süreci, epirojenez, morfolojik ve paleo-oşinografik değişimler
- Gondwana 'da dağ kuşaklarının metamorfik çekirdeklerindeki mineral büyümeleri,
- Pan-Gondwana orojenik kuşaklar ve Prekambriyen-Cambriyen sınırı
-Paleozoyik buzullanması ve bulgular,
- Son superkıta 'nın parçalanması ve Kimmerit / alkali kompleksin kökeni, karasal bazaltların kaynağı.

Adres : Department of Geological Sciences
University of Cape Town
Private Bag Rondebosch, 7700
South Africa

Kongre tarihi : 28-Haziran / 5-Temmuz-1998

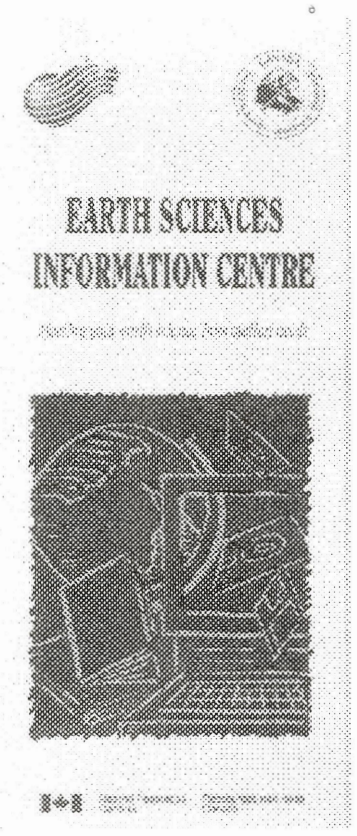


OTTAWA' 97
50th ANNIVERSARY CELEBRATION

Konular:

- Metamorfik petrolojide mineral-ölçekleri
- Kanada Jeolojisi
- Bugünkü ve eski şevlerin jeolojisi
- Kıtasal yay-arkası riftlerinin tektonik, magmatik ve hidrotermal evrimi
- Batı Maritimes baseninin kökeni ve evrimi
- NATMAP kalkanı projesi
- Radar uzaktan algılama ve RADARSAT
- Jeolojik data yöntemi ve GIS
- Kuvaterner sedimanlarındaki akifer hidrolojisi ve bölgesel Jeoloji
- Maden yatakları ve jeolojisi
- Batı superior LITHOPROBE ve NATMAP projesi
- Metamorfik harita alma
- Günümüz ve geçmişteki dökümanlarla çevresel değişim

- Grenville orojenezininin günümüzdeki etkileri
Adres : Ottawa '97
Geological Survey of Canada
601 Booth Street,
Ottawa, Ontario, Canada K1A OES
İkinci duyuru tarihi : Mart-1997
Kongre tarihi : 19-21 Mayıs-1997

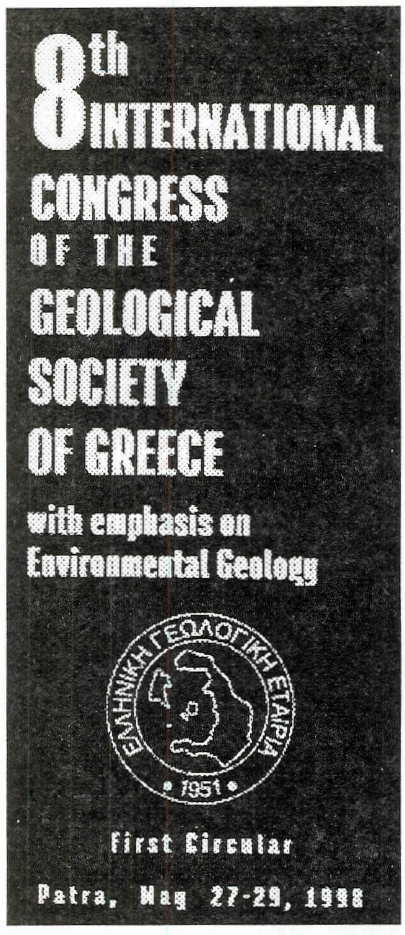


EARTH SCIENCE INFORMATION CENTRE, CANADA

Konular:
-Jeoloji, jeokimya, jeokronoloji, jeofizik, mineral kaynakları, mineraloji, paleantoloji, petroloji, tektonik.
Adres: 601 Booth Street
Ottawa, Ontario CANADA K1A OE8
Tel: 613-996-3919 **Fax:** 613-943-8742
internet: Library@gsc.nrcan.gc.ca.

8th International Congress of the Geological Society of Greece

Konular:
Yunanistan ve Akdeniz Bölgesi 'nin jeolojisi ve çevre jeolojisi, Yapısal jeoloji, stratigrafi, paleontoloji, mineraloji-petrografi, maden yatakları, endüstriyel mineral ve kayaçlar, jeokimya, jeofizik, sismoloji,

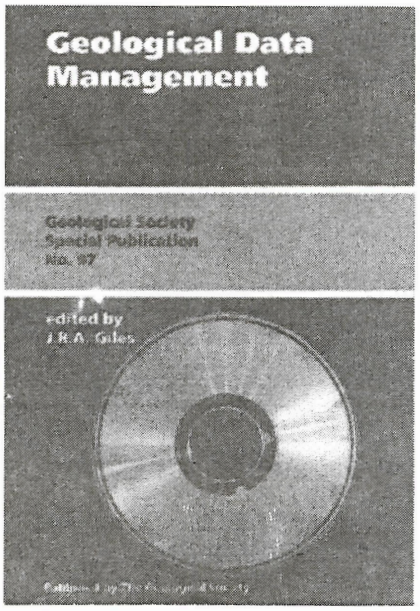


neotektonik, jeotermik, mineral ve enerji kaynakları, jeokimya, hidrojeoloji, mühendislik jeolojisi, deniz jeolojisi, fiziksel cografya, uzaktan algılama, jeolojide bilgisayar uygulamaları, çevre jeolojisi
Adres: Mrs. D. Soldatou
University of Patra-Department of Geology
P.O. Box 1421-261 10 Patra-Greece
Bildirileri son gönderme tarihi : *31. Ocak. 1998*
Sempozyum tarihi : *27-29.Mart.1998*

Yeni Yayınlar / Kitaplar

GEOLOGICAL DATA MANAGEMENT (JEOLOJİK VERİ YÖNETİMİ)
J.R.A. Gilles, K. Rasmussen, K.J. Chew, J.S. Coast...

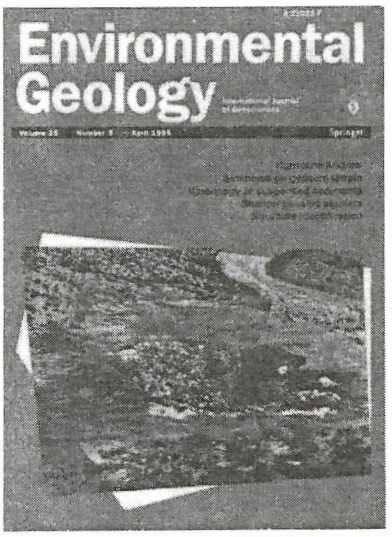
Bu kitap yaratıcılık, yöneticilik ve jeolojik veri tabanı kullanımı, jeolojik veri tabanı dizaynı ve yönetimindeki prensip ve pratik uygulamaları kapsamaktadır.



içindekiler: Jeolojik veri yönetimi, veri tabanı, veri tabanı analizleri ve jeolojik sistemin oluşturulması, petrol jeolojisi veri tabanının genel modellemesi, jeokimyasal veri tabanı dzaynı, BGS deneyleri, jeolojik harita verileri, jeolojik verilerin değerlendirilmesi, endüstri için veri modelleri, paleantoloji veri tabanının yaratılması, kaya mekaniği ve jeoteknik veri tabanı, veri yönetimi, jeolojik veri yönetimi, NERC deniz bilimlerinde uygulama ve araştırmaya yönelik veri tabanı, jeolojik veri değerleri ve petrol endüstrisinde yöneticilik, İngiltere ve Galler 'deki yeraltısu seviyesi, Hondras 'daki hidrojeolojik veri tabanı, CD-ROM ve petrol endüstrisindeki uygulamaları.
Geological Society Special Publication No.97, 192 sayfa, ISBN 1-897799-39-X, ederi:55 sterlin, 91 dolar.

ENVIRONMENTAL GEOLOGY (ÇEVRE JEOLOJİSİ)

Editörler: P.E. LaMoreaux (Tuscaloosa-Almanya); A. McCarley (Tuscaloosa - Almanya); G. Dörhöfer (Hannover - Almanya)
- Endüstriyel aktivitelerle ortaya çıkan su ve toprak kirliliği
- Taşınma ile ilişkili çevre problemleri
- Jeolojik işlevler ve biyosistem ve insan
- İnsan ürünü veya jeolojik kirlenme
- Dünyadaki materyallerin yarattığı çevre problemleri

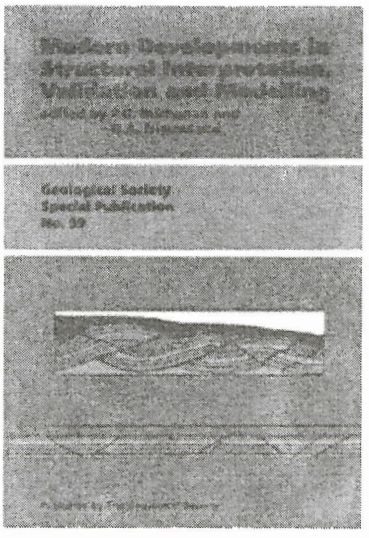


- Petrol, gaz, su ve enerji gibi endüstriyel mineral, kömür, madenlerin aktiviteleri sonucu ortaya çıkan çevre problemleri
- Kirliliğin yarattığı çevre etkileri
- Sosyo-politik bölge yöneticiliği
- Data-bank ve bilgi sistemleri ile çevre yöneticiliği

EARLY PRECAMBRIAN PROCESSES (ERKEN PREKAMBRİYEN İŞLEVLER)

M.P. Coward, R.W. Nesbitt, M.J. de Wit, P. Choukroune, R.G. Park, T.J. Wynn,

Bu kitap Prof. John Sutton 'un çalışmalarına itaf edilmiştir. Erken Prekambriyen döneme ait jeolojik problemler ve tarihsel jeolojisini kapsamaktadır.



İçindekiler: hidrosfer ve okyanussal kabuk arasındaki geçişler, ilk kıtasal kabuk, kabuk gelişimi, yüzey ve atmosferin evrimi, eski ekoloji, bakterilerin evrimine kanıtlar, büyük ölçekte biyosfer, greenstones kuşaklarının tektoniği, Arkean gelişimi, Zimbabve 'de Arkean deformasyonuna örnekler, Zimbabve kratonunda Arkean felsik sekansının zirkon jeokronolojisi, Arkean super kıta oluşumu, Yilgam kratonuna kanıtlar, Yilgam kratonundaki altın yatakları, Arkean 'daki hidrotermal sistemler, Kuzey Atlantik ve Baltık kratonundaki Erken Protorezoyik dayklar, Paleoproterozoyik Laurentia-Baltıca ilişkisi, alt kıtasal kabuğun deformasyonu

Geological Society Special Publication No.95, 308 sayfa, 149 şekil, ISBN 1-897799-36-5, 1995, ederi: 68 sterlin, 112 dolar.

Jeoloji Takvimi

1997

janvier 1997
Dindigul, Inde
Drought, groundwater pollution and management.
— Managing director, Tamilnadu water supply and drainage board, TWAD House, Chepauk, Madras 600 005, Inde.

* 19-24 janvier 1997
Puerto Vallarta, Mexique
IAVCEI, general assembly.
— Organizing Committee, Instituto de Geofisica, UNAM Circuito exterior, Ciudad Universitaria, C.P. 04510, Maxique. D.-F. Fax 5/550 24 86

* 28-29 janvier 1997
Oslo, Norvège
New Trends in Geoscience Computing.
— Norwegian Petroleum Society, Po Box 1897 Vika, N 0124 Oslo, Norvège. Tél. 47/22 43 00 50. Fax 47/22 55 46 30.

* 5-6 mars 1997
Londres, G.-B.
Transpressional and Transtensional Tectonics.
— Bob Holdsworth, Dept. of Geological Sciences, University of Durham, Durham DH1 3LE, G.-B. Fax 44/ 01 191 374 2510. E-mail : R.E.Holdsworth@durham.ac.uk

* 8-13 mars 1997
Yaoundé, Cameroun
3e Colloque de stratigraphie et de paléogéographie de l'Atlantique sud, 13e Colloque africain de micropaléontologie et Conférence annuelle de l'IGCP n° 381.
— Société nationale des hydrocarbures, Comité d'organisation des Colloques, BP 955, Yaoundé, Cameroun. Tél. (237) 20 32 53. Fax (237) 20 46 51/ 20 98 69.

* 20-22 mars 1997
Séville, Espagne
Colloque hispano-français : milieux carbonatés continentaux.
— J.-L. Cuendon, CNRS, Centre Aixois de Géographie Physique, 29, Av. R.-Schuman, F 13621 Aix-en-Provence Cedex 1. Tél. 42 95 38 70. Fax 42 95 04 20.
— F. Diaz Del Omo, Dept. Géographie Physique, Université de Séville, c/Maria de Padilla s/n, 41002 Séville, Espagne. Tél. 34/54 55 13 66. Fax 34/54 55 13 51.

* 24-27 mars 1997
Braga, Portugal
The 4th All Portuguese Language Countries Geochemical Congress and the 10th Portuguese Geochemical week.
— Graciete Dias, Dpt. Ciencias da Terra, Univ. Minho, Campus de Gualtar, 4709 Braga Codex, Portugal. Tél. 351/ 53 60 43 05. Fax 351/53 60 43 04. E-mail : geoquimica@ci.uminho.pt ; URL:http : //dolta.ci.uminho.pt/ct/port/homepage.html.

* 9-11 avril 1997
Mons, Belgique
Géologie Régionale du Sud-Brabant aux collines de l'Artois.
— P. Doremus et M. Hennebert, Service de Géologie Fondamentale et Appliquée, Faculté Polytechnique de Mons, rue de Houdain, 9 - 7000 Mons, Belgique. Tél. 32/(0) 65 37 46 08. Fax 32/(0) 65 37 46 10. E-mail : cab@fpms.fpms.ac.be.

* 13 avril - 3 mai 1997
Rabat, Maroc
5e Assemblée scientifique de l'AISH : Symposiums et atelier Karst hydrology.
— IAHS SAS-97 Organising Committee, Direction générale de l'hydraulique, Rabat-Chellah, Maroc. Tél. 212/7 76 90 08/77 87 42. Fax 212/7 77 86 96.

* 14-17 avril 1997
Montpellier, France
Congrès international : biochronologie mammalienne du Cénozoïque en Europe et domaines reliés.
— J.-P. Aguilar ou S. Legendre, Lab. de Paléontologie - CC84, Univ. Montpellier II, 34095 Montpellier Cedex 5, France. Tél. 33/67 14 32 51/54. Fax 33/67 14 36 10. E-mail : biochrom@isem.univ.montp2.fr.

* 23 avril - 3 mai 1997
Rabat, Maroc
AISH'97 - 5e assemblée scientifique de l'Association International des Sciences Hydrologiques.
— IASH'97 Organizing Committee, Direction Général de l'Hydraulique, Casier Rabat-Chellah-Maroc. Tél. 212/ (7) 77 90 08 /77 87 42. Fax 212/ (7) 77 86 96.

19-21 mai 1997
Ottawa, Canada
Ottawa'97, Réunion annuelle de l'Association géologique et de l'Association minéralogique du Canada.
— Commission géologique du Canada, pièce 757, 601 rue Booth, Ottawa. Canada Ontario K1A OE8 Tél. 1/613 947 76 49. Fax 1/613 947 76 50. E-mail : ottawa97@emr.Ca.

25-30 mai 1997
Jérusalem, Israël
18th International Geochemical Exploration Symposium (AEG).
— IGES Secretariat, PO Box 50006, Tel-Aviv, 61500 Israël. Fax 972/3 514 00 77.

26-30 mai 1997
Genève, Suisse
European Assoc. of Geoscientists & Engineers (EAGE), 59th Conference.
— EAGE, E.H. Bornkamp, PO Box 298, NL 3700 AG Zeist, Pay-Bas. Tél. 31/3069 62 655. Fax 31/3069 62 640.

23-27 juin 1997
Athènes, Grèce
Symposium international sur la géologie de l'ingénieur et de l'environnement.
— IAEG, "Athens 97", P.O. Box 19 140 GR. 117 10 Athènes, Grèce. Fax 301/924 25 70.

1e - 9 juillet 1997
Melbourne, Australie
1997 Joint assemblies of the International Association of Meteorology and Atmospheric Sciences & International Association for Physical Sciences of the Ocean.
— IAMAS - IAPSO secretariat, Convention Network, 224 Rouse street, Port Melbourne Victoria 3207 Australie. Tél. 61/3 96 46 41 22. Fax 61/3 96 46 77 37. E-mail : mscarlett@peg.apc.org.

10-12 juillet 1997
Vienne, Autriche
European Palaeontological Association, 2e Congrès européen de Paléontologie : climates, past, present, future.
— L. Grauvogel-Stamm, Institut de Géologie, 1, rue Blessig, 67084 Strasbourg Cedex, France. Tél. 33/88 35 85 70. Fax 33/88 36 72 35.

* 10-17 août 1997
La Chaux-de-Fonds (Neuchâtel), Suisse
12e Congrès international de spéléologie et 6e Colloque d'hydrologie en pays calcaire et en milieu fissuré.
— Sublime, Case postale 4093, CH-2304, La Chaux-de-Fonds, Suisse. E-mail : congress.uis97@chyn.unine.ch.
6e Colloque d'hydrologie en pays calcaire et en milieu fissuré, avec excursions (15-17 août). *In n° 58.*
— F. Zwahlen, Centre d'hydrogéologie, 11, rue Emile-Argand, Case postale 2, CH 2007, Neuchâtel, Suisse. Tél. 41/38 23 26 00. Fax 41/38 23 26 01. E-mail : congress.uis97@chyn.unine.ch. Internet : http : //www.unine.ch/uis97/.

18-29 août 1997
Thessalonique, Grèce
29th General Assembly of the International Association of seismology and physics of the Earth's interior.
— 29th IASPEI general assembly geophysical laboratory, University, GR - 54006,Thessaloniki, Grèce. Tél. 30/ 31 998 526. Fax 30/31 998 528. E-mail : iaspei@olymp.ccf.auth.gr.

* 28 août - 3 sept. 1997
Bologne, Italie
AIG IVth International Conference on Geomorphology.
— Paolo Forti, Planning Congressi, via Crociali 2, I - 40138 Bologne, Italie. Fax 19 39/51 35 45 22.

1-5 sept. 1997
Istanbul, Turquie
Symposium International on Geology and environment. *In n° 58.*
— GEOENV'97, International symposium geoscience, PK 464 Yenisehir, 06444 Ankara, Turquie. Tél. 90/312 434 36 01. Fax 90/312 434 23 88. E-mail : jdogan@jeo.hun.edu.tr.

* 2-4 sept 1997
Londres, G.-B.
Tunnelling 97 (Conference and exhibition).
— The Conference Office, The Institution of Mining and Metallurgy, 44 Portland Place, Londres W1N 4BH, G.-B. Tél. 44/17 15 80 38 02. Fax 44/17 14 36 53 88.

7-10 sept. 1997
Vienne, Autriche
AAPG - International Conference and exhibition.
— AAPG. Convention Dept., Box 979. Tulsa, OK 74101, USA. Tel 1/918 560 26 79, Fax 1/918 560 26 84.

21-27 sept 1997
Nottingham, G.-B.
Groundwater in the Urban Environment, XXVIIth Congress of IAH.
— Stephen Foster, Conference Nottingham, 309 Hayden Road, Nottingham NG5 1AZ, G.-B. Tél. 44/11 59 85 65 45. Fax 44/11 59 85 86 15.

* 26-29 oct. 1997
Londres, G.-B.
Petroleum geology of NW Europe.
— CASIL, 4 Cavendish Square, Londres, W1M OBX, G.-B. Tél. 44/17 14 99 09 00. Fax 44/17 16 29 32 33.

1998

* 8-12 juin 1998
Leipzig, Allemagne
European Assoc. of Geoscientists & Engineers (EAGE), 60th Conference.
— EAGE, E.H. Bornkamp, PO Box 298, NL 3700 AG Zeist, Pay-Bas. Tél. 31/3069 62 655. Fax 31/3069 62 640.

29 juin - 18 juil. 1998
Johannesbourg, Afrique du Sud
8th International platinum symposium (IAGOD/CODMUR).
— C.A. Lee, PO Box 68108, Bryanston, South Africa. Tél. 27/11 373 25 80. Fax 27/11 836 03 71.

9-15 août 1998
Toronto, Canada
International Mineralogical Association ; IMA'98.
— A.J. Naldrett, Dept. Geology, University of Toronto, Canada M 5S 3B1. Tél 1/416 978 30 30. Fax 1/416 978 39 38. E-mail : ima98@quartz.geology.utoronto.ca.

20-26 août 1998
Montpellier, France
16e Congrès mondial des Sciences du sol. *In n° 57.*
— CNEARC, 16e Congrès mondial de Science du sol, Av. d'Agropolis, B.P. 50 98, Agropolis 34 394 Montpellier Cedex, France. Tél. 33/67 04 75 38. Fax 33/67 04 75 49. E-mail : isss@agropolis.fr. Serveur www http://www.cirad.fr/isss.html.

* oct. - nov. 1998
Physical, chemical and biological aspects of aquifer-stream sediment interrelations, 28th. IAH Congress.
— J. Rosencheim, USGS MS 414, National Center, Reston Va 22092, USA. Fax 1/703 648 57 22.