

Curriculum Vitae HANS-RUDOLF WENK

4/30/2025

EDUCATION:

- 1961-63 Undergraduate studies at the University of Basel
- 1963-65 Graduate studies in crystallography at the University of Zurich
- 1965 Ph.D. Thesis on X-ray petrofabric analysis under Professor F. Laves

PROFESSIONAL EXPERIENCE:

- 1965-66 Research Associate, Department of Crystallography, ETH, Zurich (F. Laves) 1966-
Co-worker, Swiss Geological Survey
- 1966-67 Research Geophysicist, Institute of Geophysics, University of California at Los
Angeles (D.T. Griggs and J.M. Christie)
- 1967-70 Assistant Professor of Geology, Department of Geology and Geophysics, Berkeley
- 1970-74 Associate Professor of Geology, Department of Geology and Geophysics, Berkeley
- 1971-72 Miller Research Professor
- 1974- Professor of Geology, Department of Geology and Geophysics, Berkeley
- 1974-75 Gastprofessor, Institut f. Kristallographie, University of Frankfurt
- 1979-80 Professeur Invité, Laboratoire de Métallurgie Structurale, Université de Metz, France
- 1979- Associate Faculty Scientist, Lawrence Berkeley Laboratory
- 1981; 1983 Humboldt Research Fellowship, Leave at University of Kiel
- 1985-2000 Collaborator with Center for Materials Science, LANL
- 1986 Visiting professor, Nanjing University, PRC
- 1987-1988 Senior U.S. Scientist Award, Alexander von Humboldt-Stiftung. Technical
University Hamburg-Harburg, Germany
- 1989 Professeur Invité, Laboratoire de Physique et Mécanique des Matériaux, Université de
Metz, France.
- 1991 Visiting professor, Nanjing University, PRC
- 1991-1992 Berndt Matthias Scholar, Center for Materials Science, LANL
- 1991 Professeur Invité, Laboratoire de Physique et Mécanique des Matériaux, Université de
Metz, France
- 1994 Visiting Professor, University of Perugia, Italy
- 1994-1995 Chercheur Invité, University of Grenoble, France and Laboratoire de
Crystallographie, CNRS
- 1995 Invited scientist, Center for Materials Science, LANL
- 1996 Senior Research Fellow, Japanese Soc. Promotion of Science, University of Hiroshima
- 1998 Invited Scholar, UC Campus-Laboratory Program, CMS, LANL
- 1998 Principal Investigator, HIPPO, UC Materials Research Neutron Diffractometer at
LANSCE
- 2000 Visiting Professor, University of Metz, France

- 2001 Visiting Scientist, European Synchrotron Research Facility, Grenoble
- 2001 Re-invitation as Senior U.S. Scientist, Alexander von Humboldt-Stiftung. Bayreuth, Germany
- 2002 Visiting Professor, Dip. Ingegneria dei Materiali, Universita, Trento, Italy
- 2005 Visiting Professor, GeoForschungsZentrum Potsdam, Germany
- 2006-2009 Department Chair and Garniss Curtis Professor of Geology
- 2008-2011 Executive Committee, LANSCE User Group
- 2009 Visiting Professor, Technical University of Ankara
- 2009- Professor of the Graduate School
- 2015 Visiting Professor, Dip. Ingegneria dei Materiali, Universita, Trento, Italy
- 2019 Visiting Professor and Fulbright Fellow. University of Salamanca, Spain

HONORS

- Fellow Mineralogical Society of America, 1980
- Senior U.S. Scientist Award, Alexander von Humboldt-Stiftung, 1987
- Berndt Matthias Scholar, Los Alamos National Laboratory, 1991
- Senior Research Fellow, Japanese Soc. Promotion of Science, 1996
- Fellow American Geophysical Union, 2001
- Wasson Research Medal, American Concrete Institute, 2003
- Abraham Gottlob Werner Medaille, Deutsche Mineralogische Gesellschaft, 2010
- Fulbright Fellow, University of Salamanca, Spain, 2019

PUBLICATIONS

Over 470 papers in international journals and 5 books.

PH.D. STUDENTS

- G. Nord (1971)
- H. Ulbrich (1973)
- J. Shore (1975)
- R. Reeder (1983)
- B. Erskine (1986)
- D. Ague (1987)
- T. Takeshita (1987)
- L. Goodwin (1988)
- W. Hirt (1991)
- F. Heidelberg (1994)
- K. Bennett (1994)

S. Cady (1994)
 D. Janney (1996)
 Y. Xie (2002)
 K. Shomglin (2004)
 J. Pehl (2005)
 L. Miyagi (2009)
 W. Kanitpanyacharoen (2012)
 P. Kaercher (2014)
 E. Zepeda-Alarcon (2017)
 P. Viseshchitra (2021)
 B. C. Chandler (2021)
 Michelle Devoe (2024)

CURRENT GRADUATE STUDENT

Amartya Kattemalavadi

VISITING SCIENTISTS

Jingyi Huang (Beijing, China) Roman Vasin (Dubna, Russia)

MAIN RESEARCH SUPPORT

NSF: Anisotropy Changes during Deformation and Phase Transformations. #EAR1343908 NSF:
 The origin of anisotropy in the lowermost mantle (with B. Romanowicz). #EAR1464014
 DOE-BES: Anisotropy and residual stress in sedimentary rocks: Comparison of microstructural
 data with experiments. #DE-FG02-ER15637

CURRENT TEACHING: EPS298: Directed group study for graduate students

Publications HANS-RUDOLF WENK

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Books

- H.-R. Wenk and E. H. Wenk (2024). *Discovering the Unique Geology of the Bergell Alps*. Springer Verlag, 169pp.
- H.-R. Wenk and A. Bulakh (2016). *Minerals. Their Constitution and Origin*. 2nd Edn. Cambridge University Press, 621pp. ISBN 978-1-107-10626-0
- H.-R. Wenk Ed. (2006). *Neutron Scattering in Earth Sciences, Reviews in Mineralogy and Geochemistry* 63, Mineral. Soc. America, 620pp.
- H. Liu, H.-R. Wenk, T.S. Duffy Eds. (2006). *Rheology and Elasticity Studies at Ultra-high Pressures and Temperatures. Special Issue, J. Physics, Condensed Matter* 18, S921-1103.
- H.-R. Wenk and A. Bulakh (2004). *Minerals. Their Constitution and Origin*. Cambridge University Press, 646pp. (Tenth printing 2014).
- D. Mainprice, T. Popp, Y. Gueguen, E. Huenges, E. Rutter, H.-R Wenk and L. Burlini Eds. (2003). *Physical Properties of Rocks and Other Geomaterials. A Special Volume to honour Professor H. Kern. Tectonophysics, Volume* 370.
- S.-Y. Karato and H.-R. Wenk Eds. (2002). *Plastic Deformation of Minerals and Rocks, Reviews in Mineralogy and Geochemistry, Mineral. Soc. America*, 420pp.
- U.F. Kocks, C. Tomé and H.-R. Wenk (2000). *Texture and Anisotropy. Preferred Orientations in Polycrystals and Their Effect on Materials Properties*. 2nd paperback edition. Cambridge University Press, 676pp. [Download PDF](#)
- H.-R. Wenk, P. Dawson, C. Pelkie and Y. Chastel (1999). *Texturing of Rocks in the Earth's Mantle. A Convection Model Based on Polycrystal Plasticity*. Video. Amer. Geophys. U. [Download PDF](#)
- U.F. Kocks, C. Tomé and H.-R. Wenk (1998). *Texture and Anisotropy. Preferred Orientations in Polycrystals and Their Effect on Materials Properties*. Cambridge University Press, 676pp.
- H.-R. Wenk, Editor (1994) *Polyphase Polycrystal Plasticity. Special Issue: Materials Science and Engineering*, A175, 1-277.
- S.H. Kirby, A.G. Sylvester, J. Tullis and H.-R. Wenk, Editors (1993) *Microstructures and Rheology of Rocks and Rock-forming Minerals (John Christie Volume)*. Special Issue, J. Struct. Geol. 15, 1061-1271.
- H.-R. Wenk (1991). Edit. *Preferred Orientation in Deformed Metals and Rocks. An Introduction to Modern Texture Analysis (Chinese translation)*.
- H.-R. Wenk (1985). Edit. *Preferred Orientation in Deformed Metals and Rocks. An Introduction to Modern Texture Analysis*, Academic Press.
- H.-R. Wenk (1979). *Elektronia Mikroskopia B Mineralogii (Russian translation)*, MIR, Moscow, 541 pp.
- H.-R. Wenk Edit. (1976). *Electron Microscopy in Mineralogy*, Springer-Verlag, Berlin-Heidelberg-New York, 564 pp. [Download PDF](#)

Journal Publications

484. Kattamalavadi, A., Devoe, M., Wenk, H.-R. (2025). Deformation of hydrous phases Egg [AlSiO₃(OH)], δ [AlO(OH)] and stishovite [Si_{1-n}H_{4n}O₂] relevant to anisotropy of the Earth's mantle. *J. Geophys. Res.* (in press)
483. Wenk, H.-R., Kattamalavadi, A., Zhang, Y., Kennedy, E.R., Borkiewicz, O. (2025). Exploring microstructures and anisotropies of serpentinites. *Contrib. Mineral. Petrol.* 180:23, <https://doi.org/10.1007/s00410-025-02209-5>
482. Schmitt, M.M., Savage, D.J., Yeager, J.D., Wenk, H.-R., Lutterotti, L., Vogel, S.C. (2023). Texture measurements on quartz single crystal to validate coordinate systems for neutron time-of-flight texture analysis. *J. Appl. Cryst.* 56, 1764-1775, <https://doi.org/10.1107/S1600576723009275>. [Download PDF](#).
481. Hermes, R.E., Kennett, J.P., Wenk, H.-R., Bunch, T.E., Moore, C.R., LeCompte, M.A., Kletetschka, G., A., Adedeji, V., Langworthy, K., Razink, J., Brogden, V., van Devenner, B., Perez, J.P., Polson, R., Nowell, M., West, A. (2023). Microstructures in shocked quartz: linking nuclear airbursts and meteorite impacts. *ScienceOpen, Airbursts and Cratering Impacts Vol. 1*(1). DOI: 10.14293/ACI.2023.0001.
480. Vasin, R.N., Kunz, M., Wenk, H.-R., Zepeda-Alarcon, E. (2023). Crystallographic texture formation in Fe-9wt%Si alloy during deformation and phase transition at high pressure. *Geophys. J. Int.* 234, 790-806 [doi:10.1093/gji/ggad099]. [Download PDF](#).
479. Devoe, M., Tamura, N., Wenk, H.-R. (2023). Residual strain orientation in rolled titanium sheet determined with synchrotron X-ray microdiffraction. *J. Appl. Cryst.* 56, 135-142 [doi: 10.1107/S1600576722011311] [Download PDF](#).
478. Wenk, H.-R., Huang, J., Devoe, M., Gomez-Barreiro J., Vasin, R., Ren, Y., Barrios- Sanchez, S. (2022). Crystallographic and shape preferred orientation and anisotropy in slates from Northern Spain. *J. Struct. Geol.* 164, 104730. [doi.org/10.1016/j.jsg.2022.104730] [Download PDF](#).
477. Raju, S.V., Vasin, R.N., Godwal, B.K., Jeanloz, R., Wenk, H.-R., Saxena, S.K. (2021). Deformation of boron-doped Ni₃Al alloys at high pressures studied with synchrotron X-ray diffraction. *J. Appl. Phys.* 129, 225201 [doi:10.1063/5.0037012]. [Download PDF](#)
476. Chandler, C.B., Devoe, M., Kunz, M., Wenk, H.-R. (2021) Using multigrain crystallography to explore the microstructural evolution of the α olivine to γ ringwoodite transformation and ϵ -Mg₂SiO₄ at high pressure and temperature. *Minerals* 11(4), 424 [doi:10.3390/min11040424]. [Download PDF](#)
475. Chandler, C.B., Chen, L., Li, M., Romanowicz, B., Wenk, H.-R. (2021). Forward modeling seismic anisotropy in the lower mantle through 3-phase aggregate deformation. *G.J. Int.* 227(3), 1665-1681. [doi.org/10.1093/gji/ggab278] [Download PDF](#)
474. Chandler C.B., Bernier J.V., Diamond M., Kunz M., Wenk H.-R. (2021) Exploring microstructures in lower mantle mineral assemblages with synchrotron x-rays. *Science Adv.* 7, eabd3614. [DOI: 10.1126/sciadv.abd3614] [Download PDF](#)
473. Viseshchitra, P., Ercius, P., Monteiro, P.J.M., Scott, M., Ushizima, D., Li, J., Xu, K., Wenk, H.-R. (2021). 3D nanotomography of calcium silicate hydrates by transmission electron

- microscopy. *J. Am. Ceramic Soc.* 104(4), 1852-1862 [doi:10.1111/jace.17593]. [Download PDF](#)
472. Lokajicek, T., Vasin, R., Svitek, T., Petruzalek, M., Kotrly, M., Turkova, I., Onysko, R., Wenk, H.-R. (2021) Intrinsic elastic anisotropy of Westerly granite observed by ultrasound measurements, microstructural investigations, and neutron diffraction. *J. Geophys. Res. Solid Earth* 126, e2020JB020878, [doi.org/10.1029/2020JB020878]. [Download PDF](#)
471. Li, Y., Chen, K., Zhang, F., Tamura, N., Ku, C.S., Kang, H., Wenk, H.-R. (2020). XtalCAMP: a comprehensive program for the analysis and visualization of scanning Laue X-ray micro/nano-diffraction data. *J. Appl. Cryst.* 53, 1392-1403 [doi.org/10.1107/S1600576720010882]. [Download PDF](#)
470. Wenk, H.-R., Chandler, C.B., Chen, K., Li, Y., Tamura, N., Yu, R (2020). Residual lattice strain in quartzites as a potential paleo-piezometer. *Geoph. J. Int.* 222, 1363-1378 [doi:10.1093/gji/ggaa226] [Download PDF](#)
469. Wenk, H.-R., Yu, R., Cardenes, V., Lopez-Sanchez, M.A., Sintubin, M (2020). Review: Fabric and anisotropy of slates: From classical studies to new results. *J. Struct. Geol.* 138, 104066 [doi:10.1016/j.jsg.2020.104066] [Download PDF](#)
468. Kaesemer, M., Zepeda-Alarcon, E., Carson, R., Dawson, P., Wenk, H.-R. (2020). Finite element modeling of deformation response of dual phase bridgmanite/periclase with high strength contrast. *Acta Mater.* 189, 284-298 [doi:10.1016/j.actamat.2020.02061] [Download PDF](#)
467. Kanitpanyacharoen, W., Chornkrathok, S., Morley, C.K., Wenk, H.-R. (2020). Microstructural evolution and deformation mechanisms of Khan Kho Fault, Thailand. *J. Struct. Geol.* 136 [doi:10.1016/j.jsg.2020.104055] [Download PDF](#)
466. Yue, B., Hong, F., Hirao, N., Vasin, R., Wenk, H.-R., Chen, B., Mao, H.-K. (2019). A simple variant selection in stress-driven martensitic transformation, *PNAS* 116, 14905- 14909 [doi:10.1073/pnas.1906365116] [Download PDF](#)
465. Wenk, H.R., Yu, R., Tamura, N., Bischoff, D., Hunkeler, W. (2019). Slags as evidence for copper mining above Casaccia, Val Bregaglia (Central Alps). *Minerals*, MDPI 9, 292 [doi:10.3390/min9050292] [Download PDF](#)
464. Wenk, H.R., Yu, R., Vogel, S., Vasin, R. (2019). Preferred orientation of quartz in metamorphic rocks from the Bergell Alps. *Minerals*, MDPI 9(5), 277 [doi:10.3390/min9050277] [Download PDF](#)
463. Wannier, M.A., Urreiztieta, M., Wenk, H.-R., Stan, C.V., Tamura, N., Yue, B. (2019). Fallout melt debris and aerodynamically-shaped glasses in beach sands of Hiroshima Bay, Japan. *Anthropocene*, 25, 100196, [doi:10.1016/j.ancene.2019.100196] [Download PDF](#)
462. Wenk, H.-R., Kanitpanyacharoen, W., Ren, Y. (2019). Slate - a new record for crystal preferred orientation. *J. Struct. Geol.* 125 (50 year special issue), 319-324, [doi:/10.1016/j.jsg.2017.12.009] [Download PDF](#)
461. Geng, G., Vasin, R.N., Li, J., Qomi, M.J.A., Yan, J., Kunz, M., Wenk, H.-R., Monteiro, P.J.M. (2018). Preferred orientation of calcium aluminosilicate hydrate induced by compression. *Cement and Concrete Research*, 113, 186-196, [doi:10.1016/j.cemconres.2018.09.002]
460. Manga, M., Voltolini, M., Wenk, H.-R. (2018). Microlite orientation in obsidian flow
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- measured by synchrotron X-ray diffraction. *Contrib. Mineral. Petrol.* 173, 58, [doi:10.1007/s00410-018-1479-9] [Download PDF](#)
459. Mi, Z., Shieh, S.R., Kavner, A., Kiefer, B., Wenk, H.-R., Duffy, T.S. (2018). Strength study of NaCl to 56 GPa. *J. Appl. Physics* 123, 135901. [Download PDF](#)
458. Chandler, C., Yuan, K., Li, M., Cottar, S., Romanowicz, B., Tome, C., Wenk, H.-R. (2018). A refined approach to model anisotropy in the lowermost mantle. *IOP Conference Series: Mater. Sci. Eng.* 375 012002 [Download PDF](#)
457. Minor, A., Rybacki, E., Sintubin, M., Vogel, S., Wenk, H.-R. (2018). Tracking mechanical Dauphine twin evolution with applied stress in axial compression experiments on a low- grade metamorphic rock. *J. Struct. Geol.* 112, 81-94, [doi:10.1016/j.jsg.2018.04.002] [Download PDF](#)
456. Schaebitz, M., Janssen, C., Wenk, H.-R., Wirth, R., Schuck, B., Wetzel, H.-U., Meng, X., Dresen, G. (2018). Microstructures in landslides in northwest China - Implications for creeping displacements? *J. Struct. Geol.* 106, 70-85, [doi:10.1016/j.jsg.2017.11.009]
455. Wenk, H.-R., Vasin, R. (2017). Preferred orientation patterns of phyllosilicates in surface clays. *Clays and Clay Minerals* 65-5, 329-341, [doi:10.1346/CCMN.2017.064069] [Download PDF](#)
454. Romanowicz, B., Wenk, H.-R. (2017). Anisotropy in the deep Earth. *PEPI* (Review paper), 269, 58-90 [doi:10.1016/j.pepi.2017.05.005] [Download PDF](#)
453. Fazio, E., Punturo, R., Cirrincione, R., Kern, H., Pezzino, A., Wenk, H.-R., Goswami, S., Mamtani, M.A. (2017). Quartz preferred orientation in naturally deformed mylonitic rocks (Montalto Shear Zone - Italy): a comparison of results by different techniques, their advantages and limitations. *Int. J. Earth Sciences* 106, 2259-2278, [doi:10.1007/s00531- 016-1424-y] [Download PDF](#)
452. Jackson, M.D., Mulcahy, S.R., Chen, H., Li, Y., Li, Q., Cappelletti, P., Wenk, H.-R. (2017). Authigenic zeolite and Al-tobermorite mineral cements in Roman marine concrete. *Amer. Mineral.* 102, 1435-1450 [doi:10.2138/am-2017-5993CCBY] [Download PDF](#)
451. Wu, X., Lin, J.-F., Kaercher, P., Mao, Z., Liu, J., Prakapenka, V., Wenk, H.-R. (2017). Seismic anisotropy of the D'' Layer induced by (001) deformation of post-perovskite. *Nature Communications* 8, 14669 [doi:10.1038/ncomms14669] [Download PDF](#)
450. Vasin, R., Kern, H., Lokajicek, T., Svitek, T., Lehmann, E., Mannes, D.C., Chaouche, M., Wenk, H.-R. (2017). Elastic anisotropy of Tambo gneiss from Promontogno, Switzerland: a comparison of crystal orientation and microstructure-based modeling and experimental measurements. *Geophys. J. Int.* 209, 1-20 [doi:10.1093/gji/ggw487] [Download PDF](#)
449. Lokajicek, T., Svitek, T., Kern, H., Wenk, H.-R. (2016). Enhanced study of rock elastic anisotropy. 50th US Rock Mechanics, Geomechanics Symposium 3, 2492-2500.
448. Kaercher, P., Miyagi, L., Kanitpanyacharoen, W., Zepeda-Alarcon, E., Wang, Y., Parkinson, D., Lebensohn, R.A., De Carlo, F., Wenk, H.R. (2016). Two phase deformation of lower mantle mineral analogs. *EPSL* 456, 134-145 [doi:10.1016/j.epsl.2016.09.030] [Download PDF](#)
447. Miyagi, L., Wenk, H.-R. (2016). Texture development and slip systems in bridgmanite and bridgmanite + ferropericlasite aggregates. *Phys. Chem. Minerals* 43, 597-613 [doi:10.1007/s00269-016-0820-y] [Download PDF](#)

446. Janssen, C., Wenk, H.-R., Wirth, R., Morales, L., Kemnitz, H., Sulem, J., Dresen, G. (2016). Microstructures and their implications for faulting processes - insights from DGLab core samples from the Gulf of Corinth. *J. Struct. Geol.* 86, 62-74 [doi: 10.1016/j.jsg.2016.03.008] [Download PDF](#)
445. Chen, K., Kunz, M., Li, Y., Sintubin, M., Zepeda, E., Wenk, H.-R. (2016). Compressional residual stress in Bastogne boudins revealed by synchrotron X-ray microdiffraction. *Geoph. Research Letters* 43, 6178-6185 [doi:10.1002/2016GL069236] [Download PDF](#)
444. Allan, A.M., Clark, A.C., Vanorio, T., Kanitpanyacharoen, W., Wenk, H.-R. (2016). On the evolution of the elastic properties of organic-rich shale upon pyrolysis-induced thermal maturation. *Geophysics* 81(3), D271-D289 [doi:10.1190/geo2015-0514.1] [Download PDF](#)
443. Romanowicz, B., Cao, A., Godwal, B., Wenk, R., Ventosa, S., Jeanloz, R. (2016). Seismic anisotropy in the Earth's innermost inner core: testing structural models against mineral physics predictions. *Geoph. Research Letters* 43, 93-100 [doi:10.1002/2015GL066734] [Download PDF](#)
442. Kern, H., Lokajicek, T., Svitek, T., Wenk, H.-R. (2015). Seismic anisotropy of serpentinite from Val Malenco, Italy. *J. Geophys. Res., Solid Earth* 120, 4113-4129 [doi:10.1002/2015JB012030] [Download PDF](#)
441. Serdar, M., Meral, C., Kunz, M., Bjegovic, D., Wenk, H.-R., Monteiro, P.J.M. (2015). Spatial distribution of crystalline corrosion products formed during corrosion of stainless steel in concrete. *Cement and Concrete Research* 71, 93-105 [doi:10.1016/j.cemconres.2015.02.004] [Download PDF](#)
440. Eckert, J., Gourdon, O., Jacob, D.E., Meral, C., Monteiro, P.J.M., Vogel, S.C., Wirth, R., Wenk, H.-R. (2015). Ordering of water in opals with different microstructures. *Eur. J. Mineralogy* 27, 203-213 [doi:10.1127/ejm/2015/0027-2428] [Download PDF](#)
439. Haerinck, T., Wenk, H.-R., Debacker, T.N., Sintubin, M. (2015). Preferred mineral orientation of a chloritoid-bearing slate in relation to its magnetic fabric. *J. Struct. Geol.* 71, 125-135 [doi:10.1016/j.jsg.2014.09.013] [Download PDF](#)
438. Gomez-Barreiro, J., Wenk, H.-R., Vogel, S. (2015). Texture and elastic anisotropy of a mylonitic anorthosite from the Morin shear zone (Quebec, Canada). *J. Struct. Geol.* 71, 100-111 [doi:10.1016/j.jsg.2014.07.021] [Download PDF](#)
437. Chen K., Kunz M., Tamura N., Wenk H.-R. (2015). Seismic stress preserved in quartz from San Andreas Fault. *Geology* 43, 219-222 [doi:10.1130/G36443.1] [Download PDF](#)
436. Kaercher, P.M., Zepeda-Alacon, E., Prapapenka, V.B., Kanitpanyacharoen, W., Smith, J.S., Sinogeikin, S., Wenk, H.-R. (2015). Preferred orientation in experimentally deformed stishovite: implications for deformation mechanisms. *Phys. Chem. Minerals* 42, 275-285 [doi:10.1007/s00269-014-0718-5] [Download PDF](#)
435. Jackson, M.D., Landis, E.N., Brune, P.F., Vitti, M., Chen, H., Li, Q., Kunz, M., Wenk, H.-R., Monteiro, P.J.M., Ingraffea, A.R. (2014). Mechanical resilience and cementitious processes in Imperial Roman architectural mortar. *Proc. Nat. Acad. Science* 111, 18484- 18489 [doi/10.1073/pnas.1417456111] [Download PDF](#)
434. Zepeda-Alarcon, E , Nakotte, H., Gualtieri, A.F., King, G., Page, K., Vogel, S.C., Wang, H.W., Wenk, H.-R. (2014). Magnetic and nuclear structure of goethite FeOOH: A neutron

- diffraction study. *J. Appl. Cryst.* 47, 1983-1991 [doi:10.1107/S1600576714022651] [Download PDF](#)
433. Kanitpanyacharoen, W., Vasin, R., Dewhurst, D., Wenk, H.-R. (2015). Linking preferred orientations to elastic anisotropy in Muderong Shale, Australia. *Geophysics* 80, C1-C19 [doi:10.1190/geo2014-0236.1] [Download PDF](#)
432. Vasin, R., Lebensohn, R., Matthies, S., Tome, C.N., Wenk, H.-R. (2014). The influence of grain shape on elastic properties of aggregates: biotite platelets in an isotropic matrix. *Geophysics* 79, D433-441 [doi:10.1190/geo2014-0148.1] [Download PDF](#)
431. Janssen, C., Wirth, R., Wenk, H.-R., Morales, L., Naumann, R., Kienast, M., Song, S.R., Dresen, G. (2014). Faulting processes in active faults - evidence from TCDP and SAFOD drill core samples. *J. Struct. Geol.* 65, 100-116 [doi.org/10.1016/j.jsg.2014.04.004] [Download PDF](#)
430. Cottaar, S., Li, M. McNamara, A., Romanowicz, B., Wenk, H.-R. (2014). Synthetic seismic anisotropy models within a slab impinging on the core-mantle boundary. *Geophys. J. Intern.*, 199, 164-177 [doi: 10.1093/gji/ggu244] [Download PDF](#)
429. Kaercher P., Militzer B., Wenk, H.-R. (2014). Ab initio calculations of elastic constants of plagioclase feldspars. *Amer. Mineralogist* 99, 2344-2352 [doi:10.2138/am-2014-4796] [Download PDF](#)
428. Tochigi, E., Zepeda-Alarcon, E., Wenk, H.-R., Minor, A.M. (2014). In situ observation of twinning, detwinning and retwinning in quartz. *Phys Chem. Minerals* 41, 757-765 [doi:10.1007/s00269-014-0689-6] [Download PDF](#)
427. Hargis, C.W., Moon, J., Lothenbach, B., Winnefeld, F., Wenk, H.-R., Monteiro P.J.M. (2014). Calcium sulfoaluminate sodalite ($\text{Ca}_4\text{Al}_6\text{O}_{12}\text{SO}_4$). Crystal structure evaluation and bulk modulus determination. *J. Am. Ceram. Soc.*, 97, 892-898
426. Soda, Y., Wenk, H.-R. (2014). Antigorite crystallographic preferred orientations in serpentinites from Japan. *Tectonophysics* 615-616, 199-212 [doi:10.1016/j.tecto.2013.12.016] [Download PDF](#)
425. Wenk, H.-R., Lutterotti, L., Kaercher, P., Kanitpanyacharoen, W., Miyagi, L., Vasin, R. (2014). Rietveld texture analysis from synchrotron diffraction images: II. Complex multiphase materials and diamond anvil cell experiments. *Powder Diffraction* 29, 220- 232 [doi:10.1017/S0885715614000360] [Download PDF](#)
424. Lutterotti, L., Vasin, R., Wenk, H.-R. (2014). Rietveld texture analysis from synchrotron diffraction images: I. Basic analysis. *Powder Diffraction* 29, 76-84 [doi:10.1017/S0885715613001346] [Download PDF](#)
422. Vasin, R., Wenk, H.-R., Kanitpanyacharoen, W., Matthies, S., Wirth, R. (2013). Anisotropy of Kimmeridge shale. *J. Geophys. Res.* 118, 1-26 [doi:10.1002/jgrb.50259] [Download PDF](#)
421. Monteiro, P.J.M., Clodic, L., Battocchio, F., Kanitpanyacharoen, W., Chae, S.R., Ha, J., Wenk, H.-R. (2013). Incorporating carbon sequestration materials in civil infrastructure: A micro- and nano-structural analysis. *Cement and Concrete Composites* 40, 14-20 [Download PDF](#)
420. Jackson, M.D., Chae, S.R., Mulcahy, S.R., Meral, C., Taylor, R., Li, P., Emwas, A.-H., Moon, J., Yoon, S., Vola, G., Wenk, H.-R., Monteiro, P.J.M. (2013). Unlocking the secrets of Al-tobermorite in Roman seawater concrete. *American Mineralogist* 98, 1669- 1687

[doi:10.2138/am.2013.4484] [Download PDF](#)

419. Jackson, M.D., Moon, J., Gotti, E., Taylor, R., Chae, S.R., Kunz, M., Emwas, A.H., Meral, C., Guttmann, P., Levitz, P., Wenk, H.-R., Monteiro, P.J.M. (2013). Material and elastic properties of Al-tobermorite in ancient Roman seawater concrete. *J. Am. Ceram. Soc.* 96, 2598-2606 [doi:10.1111/jace.12407] [Download PDF](#)
418. Merkel, S., Liermann, H.P., Miyagi, L., Wenk, H.-R. (2013). In-situ radial x-ray diffraction study of texture and stress during phase transformations in bcc-, fcc-, and hcp-iron up to 36 GPa and 1000K. *Acta mater.* 61(14), 5144-5151 [doi:10.1016/j.actamat.2013.04.068] [Download PDF](#)
417. Miyagi, L., Kanitpanyacharoen, W., Raju, V., Kaercher, P., Knight, J., McDowell, A., Wenk, H.R., Williams, Q., Zepeda, E. (2013). Combined resistive and laser heating technique for in situ radial X-ray diffraction in the diamond anvil cell experiments at high pressure and temperature. *Rev. Sci. Instr.* 84, 025118, 1-9 [doi: 10.1063/1.4793398] [Download PDF](#)
416. Kanitpanyacharoen, W., Parkinson, D.Y., de Carlo, F., Marone, F., Wenk, H.-R., MacDowell, A., Mokso, R., Stampanoni, M. (2013). A comparative study of X-ray microtomography on shales at different synchrotron facilities: ALS, APS and SLS. *J. Synchrotron Radiation* 20, 1-9 [doi:10.1107/S0909049512044354] [Download PDF](#)
415. McCabe R.J., Kelly A.M., Clarke A.J., Wenk, H.-R. (2012). Electron backscatter diffraction (EBSD) characterization of uranium and uranium alloys. *Microscopy and Microanalysis* 18, 432-433 [doi: 10.1017/S1431927612004011]
414. Wenk H.-R. (2012). Texture analysis by advanced diffraction methods. Chapter 7 in E.J. Mittemeijer and U. Welzel Eds. *Modern Diffraction Methods*. Wiley-VCH, p173-220.
413. Chen, B., Lutker, K., Raju, S.V., Yan, J., Kanitpanyacharoen, W., Lei, J., Yang, S., Wenk, H.-R., Mao, H.-k., Williams, Q. (2012). Texture of nanocrystalline nickel: Probing the lower size limit of dislocation activity. *Science* 338, 1448-1451 [doi:10.1126/science.1228211] [Download PDF](#)
412. Janssen, C., Kanitpanyacharoen, W., Wenk, H.-R., Wirth, R., Morales, L., Rybacki, E., Kienast, M., Dresen, G. (2012). Clay fabrics in SAFOD core samples. *J. Struct. Geol.* 43, 118-127 [doi:10.1016/j.jsg.2012.07.004] [Download PDF](#)
411. Kaercher, P., Speziale, S., Miyagi, L., Kanitpanyacharoen, W., Wenk, H.-R. (2012). Crystallographic preferred orientation in wuestite (FeO) through the cubic-to- rhombohedral phase transition. *Phys. Chem. Minerals* 39, 613-626 [doi:10.1007/s00269- 012-0516-x] [Download PDF](#)
410. Chen, Kai, Dejoie, C., Wenk, H.-R. (2012). Unambiguous indexing of trigonal crystals from white beam Laue diffraction patterns: Application to Dauphiné twinning and lattice stress mapping in deformed quartz. *J. Appl. Cryst.* 45, 982-989 [Download PDF](#)
409. Wenk H.-R. (2012). Application of neutron scattering in earth sciences. *Journal of Materials* 64, 127-137 [Download PDF](#)
408. Wenk, H.-R., Vasin, R.N., Kern, H., Matthies, S., Vogel, S.C., Ivankina, T.I. (2012). Revisiting elastic anisotropy of biotite gneiss from the Outokumpu scientific drill hole based on new texture measurements and texture-based velocity calculations. *Tectonophysics* 570-571, 123-134 [doi:10.1016/j.tecto.2012.06.023] [Download PDF](#)

407. Oh, J.E., Clark, S.M., Wenk, H.-R., Monteiro, P.J.M. (2012). Experimental determination of bulk modulus of 14A tobermorite using high pressure synchrotron X-ray diffraction. *Cement and Concrete Research* 42, 397-403
406. Soyer-Uzun, S., Chae, R., Benmore, C.J., Wenk, H.-R., Monteiro, P.J.M. (2012). Investigation of compositional evolution of structure of calcium silicate hydrate (C-S-H) by total X-ray scattering. *J. Amer. Ceram Soc.* 95, 793-798
405. Battocchio, F., Monteiro, P., Wenk, H.-R. (2012). Rietveld refinement of the structures of 1.0 C-S-H and 1.5 C-S-H. *Cement and Concrete Research* 42, 1534-1548
[doi:10.1016/j.cemconres.2012.07.005] [Download PDF](#)
404. Kanitpanyacharoen, W., Kets, F.B., Wenk, H.-R., Wirth, R. (2012). Preferred orientation, microstructures and porosity analyses of Posidonia shales. *Clays and Clay Minerals* 60, 315-329 [doi:10.1346/CCMN.2012.0600308] [Download PDF](#)
403. Buatier, M.D., Chauvet, A., Kanitpanyacharoen, W., Wenk, R., Ritz, J.F., Jolivet, M. (2012). Origin and behavior of clay minerals in the Bogd fault gouge, Mongolia. *J. Struct. Geol.* 34, 77-90 [doi:10.1016/j.jsg.2011.10.006] [Download PDF](#)
402. Kanitpanyacharoen, W., Kaercher, P., Merkel, S., Miyagi, L., Tome, C., Wang, Y., Wenk, H.-R. (2012). Significance of mechanical twinning in hexagonal metals at high pressure. *Acta Mater.* 60(1), 430-442 [doi:10.1016/j.actamat.2011.07.055]
401. Mazzoleni, G., Maurizio, R., Wenk, H.-R. (2011). Itinerario No11: La via dei graniti, p. 184-199 in Mario Panozza (edt): *Un'Escursione Nello Spazio E Nel Tempo. Via GeoAlpina, Itinerari Italiani*
400. Voltolini, M., Wenk, H.-R., Gomez Barreiro, J., Agarwal, S.C. (2011). Hydroxylapatite lattice preferred orientation in bone: a study of macaque, human and bovine samples. *J. Appl Cryst.* 44, 928-934 [doi:10.1107/S0021889811024344]
399. Marquardt, H., Gleason, A., Marquardt, K., Speziale, S., Miyagi, L., Neusser, G., Wenk, H.-R., Jeanloz, R. (2011). Elastic properties of MgO nanocrystals and grain boundaries at high pressures by Brillouin scattering. *Phys. Rev. B* 84, 064131
[doi:10.1103/PhysRevB.84.064131].
398. Wenk, H.-R., Janssen, C., Kenkmann, T., Dresen, G. (2011). Mechanical twinning in quartz: shock experiments, impact, pseudotachylites and fault breccias. *Tectonophysics* 510, 69-79
[doi:10.1016/j.tecto.2011.06.016] [Download PDF](#)
397. Rybacki, E., Janssen, C., Wirth, R., Chen, K., Wenk H.R., Stromeyer, D., Dresen, G. (2011). Low-temperature deformation in calcite veins of SAFOD core samples (San Andreas fault) - microstructural analysis and implications for fault rheology. *Tectonophysics* 509, 107-119
[doi:10.1016/j.tecto.2011.05.014] [Download PDF](#)
396. Janssen, C., Wirth, R., Reinicke, A., Rybacki, E., Naumann, R., Wenk, H.-R., Dresen, G. (2011). Nanoscale porosity in SAFOD core samples (San Andreas Fault). *EPSL* 301, 179-189
[doi:10.1016/j.epsl.2010.10.040] [Download PDF](#)

395. Wenk, H.R., Cottaar, S., Tome, C., McNamara, A., Romanowicz, B. (2011). Deformation in the lowermost mantle: From polycrystal plasticity to seismic anisotropy. *EPSL* 306, 33- 45 [doi:10.1016/j.epsl.2011.03.021] [Download PDF](#)
394. Miyagi, L. Kanitpanyacharoen, W., Stackhouse, S., Militzer, B., Wenk, H.-R. (2011). The enigma of post-perovskite anisotropy: deformation versus transformation textures. *Phys. Chem. Minerals* 38, 665-678 [doi:10.1007/s00269-011-0439-y] [Download PDF](#)
393. Wenk, H.-R., Chen, K., Smith, R. (2011). Morphology and microstructure of magnetite and ilmenite inclusions in plagioclase from Adirondack anorthositic gneiss. *American Mineralogist* 96, 1316-1324 [doi:10.2138/am.2011.3760] [Download PDF](#)
392. Chen, K., Kunz, M., Tamura, N., Wenk, H.-R. (2011). Deformation twinning and residual stress in calcite studied with synchrotron polychromatic x-ray microdiffraction. *Phys. Chem. Minerals* 38, 491-500 [doi:10.1007/s00269-011-0422-7] [Download PDF](#)
391. Chen, K., Kunz, M., Tamura, N., Wenk, H.-R. (2011). Evidence for high stress in quartz from the impact site of Vredefort, South Africa. *European J. Mineral.* 23, 169-178 [doi:10.1127/0935-1221/2011/0023-2082] [Download PDF](#)
390. Kanitpanyacharoen, W., Wenk, H.-R., Kets, F., Lehr, B.C., Wirth, R. (2011). Texture and anisotropy analysis of Qusaiba shales. *Geophysical Prospecting* 59, 536-556 [doi:10.1111/j.1365-2478.2010.00942.x].style='color:#00B0F0'] [Download PDF](#)
389. Militzer, B., Wenk, H.-R., Stackhouse, S. and Stixrude, L. (2011). First principles calculation of the elastic properties of clay minerals and their application to shale anisotropy. *American Mineralogist* 96, 125-137 [doi:10.2138/am.2011.3558] [Download PDF](#)
388. Wu, L., Agnew, S.R., Ren, Y., Brown, D.W., Clausen, B., Stoica, G.M., Wenk, H.R., Liaw, P.K. (2010). The effects of texture and extension twinning on the low-cycle fatigue behavior of a rolled magnesium alloy, AZ31B. *Mater. Sci. Engin. A* 527, 7057-7067.
387. Godwal, B.K., Speziale, S., Voltolini, M., Wenk, R., Jeanloz, R. (2010). Postcotunnite phase of the intermetallic compound AuIn₂ at high pressure. *Phys. Rev. B* 82 064112.
386. Miyagi, L., Kanitpanyacharoen, W., Kaercher, P., Lee, K.K.M., Wenk, H.R. (2010). Slip systems in MgSiO₃ post-perovskite: Implications for D" anisotropy. *Science* 329, 1639- 1641 [doi:10.1126/science.1192465] [Download PDF](#)
385. Wenk, H.-R., Lutterotti, L., Vogel, S.C. (2010). Rietveld texture analysis from TOF neutron diffraction data. *Powder Diffraction* 25, 283-296 [doi:10.1154/1.3479004] [Download PDF](#)
384. Wenk, H.-R., Kanitpanyacharoen, W., Voltolini, M. (2010). Preferred orientations of phyllosilicates: Comparison of fault gouge, shale and schist. *J. Struct. Geol.* 32, 478-481 [doi:10.1016/j.jsg.2010.02.003] [Download PDF](#)
383. Skinner, L. B., Chae, S. R., Benmore, C. J., Wenk, H. R., Monteiro, P. J. M. (2010). Nanostructure of calcium-silicate-hydrates in cements. *Phys. Rev. Letters* 104, 195502 [doi:10.1103/PhysRevLett.104.195502] [Download PDF](#)
382. Janssen, C., Wirth, R., Rybacki, E., Naumann, R., Kemnitz, H., Wenk, H.-R., Dresen, G. (2010). Amorphous material in SAFOD core samples (San Andreas Fault): Evidence for for crush-origin pseudotachylytes? *Geophysical Research Lett.* 37(1), L01303. [doi:10.1029/2009GL04993] [Download PDF](#)

381. Gomez Barreiro, J., Ramon Martinez, J., Prior, D., Wenk, H.-R., Vogel, S., Diaz Garcia, F., Arenas, R., Sanchez Martinez, R., Lonardelli, I. (2010). Fabric development in a Middle Devonian intra-oceanic subduction regime: The Careon ophiolite (NW Spain). *J. Geology* 118, 163-186 [doi:10.1086/649816] [Download PDF](#)
380. Lutterotti, L., Voltolini, M., Wenk, H.-R., Bandyopadhyay, K., Vanorio, T. (2010). Texture analysis of turbostratically disordered Ca-montmorillonite. *Amer. Mineral.* 95, 98-103 [doi:10.2138/am.2010.3238] [Download PDF](#)
379. Liermann, H.-P., Merkel, S., Miyagi, L., Wenk, H.-R., Shen, G., Cynn, H., Evans, W. J. (2009). Experimental method for in situ determination of material textures at simultaneous high-pressure and high temperature by means of radial diffraction in the diamond anvil cell. *Rev. Scient. Instrum.* 80, 104501, 1-8 [doi:10.1063/1.3236365] [Download PDF](#)
378. Matthies, S., Wenk, H.-R. (2009). Transformations for monoclinic crystal symmetry in texture analysis. *J. Appl. Cryst.* 42, 564-571 [doi:10.1107/S0021889809018172] [Download PDF](#)
377. Wenk, H.-R., Monteiro, P.J.M., Kunz, M., Chen, K., Tamura, N., Lutterotti, L., Dell Arroz, J. (2009). Preferred orientation of ettringite in concrete fractures. *J. Appl. Cryst.* 42, 429- 432 [doi:10.1107/S0021889809015349] [Download PDF](#)
376. Monteiro, P.J.M., Kirchheim, A.P, Chae, S., Fischer, P., MacDowell, A.A., Schaible, E., Wenk, H.-R. (2009). Characterizing the nano and microstructure of concrete to improve its durability. *Cement and Concrete Composites* 31, 577-584. [doi:10.1016/j.cemconcomp.2008.12.007] [Download PDF](#)
375. Lin, J.-F., Wenk, H.-R., Voltolini, M., Speziale, S., Shu, J., Duffy, T. (2009). Deformation of lower mantle ferropervskite (Mg,Fe)O across the electronic spin transition. *Phys. Chem. Minerals* 36(10), 585-592 [doi:10.1007/s00269-009-0303-5]
374. Wenk, H.-R., Barton, N, Bortolotti, M, Vogel, S, Voltolini, M, Lloyd, G, Gonzalez, G (2009). Dauphiné twinning and texture memory in polycrystalline quartz. Part 3. Texture memory during phase transformation. *Phys. Chem. Minerals* 36(10), 567-583 [doi:10.1007/s00269-009-0302-6] [Download PDF](#)
373. Kunz, M., Chen, K., Tamura, N., Wenk, H.-R. (2009). Evidence for residual stress in deformed natural quartz. *American Mineralogist* 94, 1059-1062 [doi:10.2138/am.2009.3216] [Download PDF](#)
372. Barber, D.J., Wenk, H.-R., Hirth, G., Kohlstedt, D. (2010). Dislocations in minerals. Chapter 96 of *Dislocations in Solids*, Vol. 16, J. Hirth and L. Kubin Eds. Elsevier, Amsterdam 171-232. [Download PDF](#)
371. Wenk, H.-R., Armann, M., Burlini, L., Kunze K., Bortolotti M. (2009). Large strain shearing of halite: Experimental and theoretical evidence for dynamic texture changes. *EPSL* 280, 205-210 [doi:10.1016/j.epsl.2009.01.036] [Download PDF](#)
370. Merkel, S, Tome, C., Wenk, H.-R. (2009). Modeling analysis of the influence of plasticity on high pressure deformation of hcp-Co. *Phys. Rev. B* 79-6, 064110 [10.1103/PhysRevB.79.064110] [Download PDF](#)
369. Voltolini, M., Wenk, H.-R., Mondol, N.H., Bjorlykke, K., Jahren, J. (2009). Anisotropy of experimentally compressed kaolinite-illite-quartz mixtures. *Geophysics* 74, D13-D23 [doi: 10.1190/1.3002557] [Download PDF](#)

368. Wenk, H.-R. (2008). Texture changes during phase transformations studied in situ with neutron diffraction. Proc. ICOTOM 15, TMS, Pittsburgh.
367. Miyagi, L., Kunz, M., Nasiatka, J., Voltolini, M., Knight, J., Wenk, H.-R. (2008). In-situ study of texture development in polycrystalline iron during phase transformations and deformation at high pressure and temperature. J. Appl. Phys. 104, 103510 [doi:10.1063/1.3008035] [Download PDF](#)
366. Miyagi, L., Merkel, S., Yagi, T., Oshishi, Y., Wenk, H.-R. (2009). Diamond anvil cell deformation of CaSiO₃ perovskite up to 49 GPa. Physics of the Earth and Planetary Interiors 174, 159-164 [doi:10.1016/j.pepi.2008.05.018] [Download PDF](#)
365. Wenk, H.-R., Lutterotti L., Bortolotti, M. (2008). Neutron texture analysis with HIPPO at your fingertips, Research Highlights. Los Alamos National Laboratory Report LA.
364. Mao, W. L., Struzhkin, V. V., Baron, A. Q. R., Tsutsui, S., Tommaseo, C. E., Wenk, H.-R., Chow, P., Hu, M., Shu, J., Hemley, R. J., Mao, H.-k. (2008). Experimental determination of elasticity of iron at high pressure, J. Geophys. Res. 113, B09213 [doi:10.1029/2007JB005229] [Download PDF](#)
363. Speziale, S., Reichmann, H.J., Schilling, F.R., Wenk, H.-R., Monteiro, P.J.M. (2008). Determination of the elastic constants of portlandite by Brillouin spectroscopy. Cement and Concrete Research 38, 1148-1153 [doi:10.1016/j.cemconres.2008.05.006]
362. Speziale, S., Jiang, F., Mao, Z., Monteiro, P. J.M., Wenk, H.-R., Duffy, T. S., Schilling, F. (2008). Single-crystal elastic constants of natural ettringite. Cement and Concrete Research 38, 885-889 [doi:10.1016/j.cemconres.2008.02.004] [Download PDF](#)
361. Wenk, H.-R., Voltolini, M., Kern, H., Popp, H., Mazurek, M. (2008). Anisotropy of Mont Terri Opalinus Clay. The Leading Edge 27, 742-748 [Download PDF](#)
360. Miyagi, L., Nishiyama, N., Wang, Y., Kubo, A., West, D. V., Cava, R. J., Duffy, T. S., Wenk, H.-R. (2008). Deformation and texture development in CaIrO₃ post-perovskite phase up to 6 GPa and 1300 K. EPSL 268, 515-525 [doi:10.1016/j.epsl.2008.02.005] [Download PDF](#)
359. Wenk, H.-R., Voltolini, M., Mazurek, M., Van Loon, L.R., Vinsot, A. (2008). Preferred orientations and anisotropy in shales: Callovo-Oxfordian shale (France) and Opalinus Clay (Switzerland). Clays and Clay Minerals 56, 285-306 [doi:10.1346/CCMN.2008.0560301] [Download PDF](#)
358. Kunz, M., Caldwell, W.A., Miyagi, L., Wenk, H.-R. (2007). In situ laser heating and radial synchrotron diffraction in a diamond anvil cell. Rev. Scient. Instrum. 78, 063907 [doi:10.1063/1.2749443] [Download PDF](#)
357. Wenk, H.-R. Monteiro, P., Shomglin, K. (2007). Relationship between aggregate microstructure and concrete expansion. A case study of deformed granitic rocks from the Santa Rosa Mylonite Zone. J. Materials Science 43, 1278-1285 [doi:10.1007/s10853-007-2175-8] [Download PDF](#)
356. Merkel, S., McNamara, A.K., Kubo, A., Speziale, S., Miyagi, L., Meng, L., Duffy, T.S., Wenk, H.-R. (2007). Deformation of (Mg,Fe)SiO₃ post-perovskite and D'' anisotropy. Science 316, 1729-1732 [doi:10.1126/science.1140609] [Download PDF](#)

355. Gomez Barreiro, J., Lonardelli, I., Wenk, H.-R., Dresen, G., Rybacki, E., Ren, Y., Tome, C.T. (2007). Preferred orientation of anorthite deformed experimentally in Newtonian creep. *EPSL* 264, 188-207 [doi:10.1016/j.epsl.2007.09.018] [Download PDF](#)
354. Wenk, H.-R., Bortolotti, M., Barton, N., Oliver, E., Brown, D. (2007). Dauphiné twinning and texture memory in polycrystalline quartz. Part 2: In situ neutron diffraction compression experiments. *Phys. Chem. Minerals* 34, 599-607 [doi:10.1007/s00269-007-0174-6] [Download PDF](#)
353. Lonardelli, I., Gey, N., Wenk, H.-R., Humbert, M., Vogel, S.C., Lutterotti, L. (2007). In situ observation of texture evolution during $\alpha \rightarrow \beta$ and $\beta \rightarrow \alpha$ phase transformations in titanium alloys investigated by neutron diffraction. *Acta Mater.* 55, 5718-5727 [doi:10.1016/j.actamat.2007.06.017] [Download PDF](#)
352. Wenk H.-R., Huensche, I., Kestens, L. (2007). In situ observation of texture changes in ultralow carbon steel. *Mater. Trans.* 38A, 261-267 [doi:10.1007/s11661-006-9033-1] [Download PDF](#)
351. Barber, D.J., Wenk, H.-R., Gomez-Barreiro, J., Rybacki, E., Dresen, G. (2007). Basal Slip in Calcite. Evidence from Torsion Experiments. *Phys. Chem. Minerals* 34, 73-84 [doi:10.1007/s00269-006-0129-3] [Download PDF](#)
350. Barton, N.R., Wenk, H.-R. (2007). Dauphiné twinning in polycrystalline quartz. *Modelling Simul. Mater. Sci. Engin.* 15, 369-384 [doi:10.1088/0965-0393/15/3/013]
349. Wenk, H.-R., Lonardelli, I., Franz, H., Nihei, K., Nakagawa, S. (2007). Texture analysis and elastic anisotropy of illite shale. *Geophysics* 72, E69-75 [doi:10.1190/1.2432263] [Download PDF](#)
348. Lonardelli, I., Wenk, H.-R., Ren, Y. (2007). Preferred orientation and elastic anisotropy in shales. *Geophysics* 72, D33-D40 [doi:10.1190/1.2435966] [Download PDF](#)
347. Lutterotti, L., Bortolotti, M., Ischia, G., Lonardelli, I., Wenk, H.-R. (2007). Rietveld texture analysis from diffraction images. *Z. Kristallogr.* 26, 125-130 [doi:10.1524/9783486992540-020]
346. Wenk, H.-R. (2006) Neutron diffraction texture analysis. Chapter 15 in H.-R. Wenk Edit. *Neutron Scattering in Earth Sciences, Reviews in Mineralogy and Geochemistry* 63, Mineral. Soc. America, 399-426 [doi:10.2138/rmg.2006.63.15]
345. Wenk, H.-R., Lonardelli, I., Rybacki, E., Dresen, G., Barton, N., Franz, H., Gonzalez, G. (2006). Dauphiné twinning and texture memory in polycrystalline quartz. Part 1: Experimental deformation of novaculite. *Phys. Chem. Minerals* 33, 667-676 [doi:10.1007/s00269-006-0115-9] [Download PDF](#)
344. Speziale, S., Lonardelli I., Miyagi, L., Pehl, J., Tommaseo, C.E., Wenk, H.-R. (2006). Deformation experiments in the diamond-anvil cell: Texture in copper to 30 GPa. *J. Phys. Cond. Matter* 18, S1007-1020 [doi:10.1088/0953-8984/18/25/S08]
343. Miyagi, L., Merkel, S., Yagi, T., Sata, N., Ohishi, Y., Wenk, H.-R. (2006). Quantitative Rietveld texture analysis of CaSiO_3 perovskite deformed in a diamond anvil cell. *J. Phys. Cond. Matter* 18, S995-1005 [doi:10.1088/0953-8984/18/25/S07] [Download PDF](#)

342. Wenk, H.-R., Lonardelli, I., Merkel, S., Miyagi, L., Pehl, J., Speziale, S., Tommaseo, C.E. (2006). Deformation textures produced in diamond anvil experiments, analyzed in radial diffraction geometry. *J. Phys. Cond. Matter* 18, S933-947 [doi:10.1088/0953-8984/18/25/S02] [Download PDF](#)
341. Wenk, H.-R., Speziale, S., McNamara, A.K., Garner, E.J. (2006). Modeling lower mantle anisotropy development in a subducting slab. *EPSL* 245, 302-314 [doi:10.1016/j.epsl.2006.02.028] [Download PDF](#)
340. Bozzolo, N., Dewobroto, N., Wenk, H.R., Wagner, F. (2007). Microstructure and microtexture of highly cold-rolled commercially-pure titanium. *J. Mater. Sci.* 42, 2405- 2416 [doi:10.1007/s10853-006-1302-2]
339. Tommaseo, C.E., Merkel, S., Speziale, S., Devine, J., Wenk, H.-R. (2006). Texture development and deformation mechanisms in magnesiowuestite at high pressure. *Phys. Chem. Minerals* 33, 84-97 [doi:10.1007/s00269-005-0054-x] [Download PDF](#)
338. Merkel, S., Kubo, A., Miyagi, L., Speziale, S., Duffy, T.S., Mao, H.-k., Wenk, H.-R. (2006). Plastic deformation of MgGeO₃ post-perovskite at lower mantle pressures. *Science* 311, 644-646 [doi:10.1126/science.1121808] [Download PDF](#)
337. Feinberg, J., Wenk, H.-R., Scott, G.R., Renne, P. (2006). Preferred orientation and anisotropy of seismic and magnetic properties in gabbro-norites from the Bushveld layered intrusion. *Tectonophysics* 420, 345-356 [doi:10.1016/j.tecto.2006.03.017] [Download PDF](#)
336. Xu, Z., Wang, Q., Ji, S., Chen, J., Zeng, L., Yang, J., Chen, F., Liang, F., Wenk, H.-R. (2006). Petrofabrics and seismic properties of garnet peridotite from the UHP Sulu terrane (China): Implications for olivine deformation mechanism in a cold and dry subducting continental slab. *Tectonophysics* 421(1), 111-127 [doi:10.1016/j.tecto.2006.04.010] [Download PDF](#)
335. Wenk, H.-R., Ischia, G., Nishiyama, N., Wang, Y., Uchida T. (2005). Texture development and deformation mechanisms in ringwoodite. *Phys. Earth Planet. Int.* 152, 191-199 [doi:10.1107/S090904950500138X] [Download PDF](#)
334. Silva, D. A., Wenk, H.-R., Monteiro, P.J.M. (2005). Comparative investigation of mortars from Roman Colosseum and cistern. *Thermochimica Acta* 438, 35-40 [doi:10.1016/j.tca.2005.03.003] [Download PDF](#)
333. Matthies, S., Pehl, J., Wenk, H.-R., Vogel, S. (2005). Quantitative texture analysis with the HIPPO TOF diffractometer. *J. Appl. Cryst.* 38, 462-475 [doi:10.1107/S0021889805006187] [Download PDF](#)
332. Feinberg, J., Scott, G.R., Renne P., Wenk, H.-R. (2005). Exsolved magnetite inclusions in silicates: Features determining their remanence behavior. *Geology* 33, 513-516 [doi:10.1130/G21290.1] [Download PDF](#)
331. Pehl, J., Wenk, H.-R. (2005). Evidence for regional Dauphiné twinning in quartz from the Santa Rosa mylonite zone in Southern California. A neutron diffraction study. *J. Struct. Geol.* 27, 1741-1749 [doi:10.1107/S0021889805006059] [Download PDF](#)
330. Wenk, H.-R., Lonardelli, I., Vogel, S.C., Tullis, J. (2005). Dauphiné twinning as evidence for an impact origin of preferred orientation in quartzite: An example from Vredefort, South Africa. *Geology* 33, 273-276 [doi:10.1130/G21163.1] [Download PDF](#)

329. Lonardelli, I., Wenk, H.-R., Lutterotti L., Goodwin M. (2005). Texture analysis from synchrotron diffraction images with the Rietveld method: dinosaur tendon and salmon scale. *J. Synchr. Radiation*. 12, 354-360 [doi:10.1107/S090904950500138X] [Download PDF](#)
328. Ischia, G., Wenk, H.-R., Lutterotti, L., Berberich, F. (2005). Quantitative Rietveld texture analysis of zirconium from single synchrotron diffraction images. *J. Appl. Cryst.* 38, 377- 380 [doi:10.1107/S0021889805006059] [Download PDF](#)
327. Wenk, H.-R., Lonardelli, I., Pehl, J., Devine, J., Prakapenka, V., Shen G., Mao H.-k. (2004). In situ observation of texture development in olivine, ringwoodite, magnesiowuestite and silicate perovskite at high pressure. *Earth Planet. Sci. Lett.* 226, 507-519 [doi:10.1016/j.epsl.2004.07.033] [Download PDF](#)
326. Merkel, S., Wenk, H.-R., Gillet, P., Mao H.-k., Hemley R.J. (2004). Deformation of polycrystalline iron up to 30 GPa and 1000K. *Phys. Earth Planet. Inter.* 145, 239-251 [doi:10.1016/j.pepi.2004.04.001] [Download PDF](#)
325. Wenk, H.-R., Van Houtte, P. (2004). Texture and Anisotropy. *Reports on Progress in Physics* 67, 1367-1428 [Download PDF](#)
324. Wenk, H.-R. (2004). The Texture of Rocks in the Earth's Deep Interior. Part II. Application of Texturing to the Deep Earth. *Encyclopedia of Materials: Science and Technology – Online Updates*, Elsevier, Oxford, 1-11.
323. Wenk, H.-R. (2004). The Textures of Rocks in the Earth's Deep Interior: Part I. Understanding Anisotropy and Textures in Earth Materials. *Encyclopedia of Materials: Science and Technology - Online Updates*, Elsevier, Oxford, 1-11.
322. Wenk, H.-R., Lonardelli, I., Williams, D. (2004). Texture changes in the hcp-bcc-hcp transformation of zirconium studied in situ by neutron diffraction. *Acta mater.* 52, 1899- 1907 [doi:10.1016/j.actamat.2003.12.029] [Download PDF](#)
321. Xie, Y. Wenk, H.-R., Lutterotti L., Kovacs, F. (2004). Texture analysis of ancient coins with TOF neutron diffraction. *J. Materials Science* 39, 3329-3337. [Download PDF](#)
320. Nishikawa, O., Saiki, K., Wenk, H.-R. (2004) Intra-granular strains and grain boundary morphologies of dynamically recrystallized quartz aggregates in a mylonite. *J. Struct. Geol.* 26, 127-141. [Download PDF](#)
319. Feinberg, J., Wenk, H.-R., Renne, P., Scott, G.R. (2004). Epitaxial relationships of clinopyroxene-hosted magnetite determined using electron backscatter diffraction (EBSD) technique. *Am. Mineral.* 89, 462-466. [Download PDF](#)
318. Shomglin, K., Turanli, L., Wenk, H.-R., Monteiro P.J.M., Sposito G. (2003). The effects of potassium and rubidium hydroxide on the alkali-silica reaction. *Cement and Concrete Research* 33, 1825-1830. [Download PDF](#)
317. Wenk, H.-R., Lutterotti, L., Vogel, S. (2003). Texture analysis with the new HIPPO TOF diffractometer. *Nucl. Instr. Methods A* 515, 575-588 [doi:10.1016/j.nima.2003.05.001] [Download PDF](#)
316. Puig-Molina, A., Wenk, H.-R., Berberich, F., Graafsma H. (2003). Method for in situ texture investigation of recrystallization of Cu and Ti by high-energy synchrotron X-ray diffraction. *Z. Metallk.* 94, 1199-1205.

315. Wenk, H.-R., Grigull, S. (2003). Synchrotron texture analysis with area detectors. *J. Appl. Cryst.* 36, 1040-1049. [Download PDF](#)
314. Lebensohn, R.A., Dawson, P.R., Wenk, H.-R., Kern, H.M. (2003). Heterogeneous deformation and texture development in halite polycrystals: comparison of different modeling approaches and experimental data. *Tectonophysics* 370, 287-311 [doi:10.1016/S0040-1951(03)00192-6] [Download PDF](#)
313. Xie, Y., Wenk, H.-R., Matthies, S. (2003). Plagioclase preferred orientation by TOF neutron diffraction and SEM-EBSD. *Tectonophysics* 370, 269-286 [doi:10.1016/S0040-1951(03)00191-4] [Download PDF](#)
312. Meneghini, C., Dalconi, M.C., Nuzzo, S., Mobilio, S., Wenk, H.-R. (2003). Rietveld refinement on X-ray diffraction patterns of bioapatite in human fetal bones. *Biophys. J.* 84, 2021-2029. [Download PDF](#)
311. Merkel, S., Wenk, H.-R., Badro, J., Montagnac, J., Gillet, P., Mao H.k., Hemley, R.J. (2003). Deformation of (Mg_{0.9},Fe_{0.1})SiO₃ perovskite aggregates up to 32 GPa. *Earth Planet. Sci. Lett.* 209, 351-360 [doi:10.1016/S0012-821X(03)00098-0] [Download PDF](#)
310. Wenk, H.-R. (2002). Texture and anisotropy. In *Plastic Deformation of Minerals and Rocks*, S.-Y. Karato and H.-R. Wenk Eds. *Reviews in Mineralogy and Geochemistry*, Mineral. Soc. America, vol. 51, 291-329.
309. Wenk, H.-R., Pehl, J., Williams, D.J. (2002). Texture changes during the quartz α - β phase transition studied by neutron diffraction, Los Alamos National Laboratory report LA- 14036-PR, 36-39.
308. Merkel, S., Wenk, H.-R., Shu, J., Shen, G., Gillet, P., Mao H.-k., Hemley, R.J. (2002). Deformation of polycrystalline MgO at pressures of the lower mantle. *J. Geophys. Res.* 107(B11), 2271 [doi:10.1029/2001JB000920] [Download PDF](#)
307. Blackman, D.K., Wenk, H.-R., Kendall, J.-M. (2002). Seismic anisotropy of the upper mantle: 1. Factors that affect mineral texture and effective elastic properties. *Geochemistry, Geophysics, Geosystems* 3(9), 8601 [doi:10.1029/2001GC000248] [Download PDF](#)
306. Solas, D.E., Tome, C.N., Engler O., Wenk, H.-R. (2001). Deformation and recrystallization of hexagonal metals: Modeling and experimental results for zinc. *Acta Mater.* 49(18), 3791-3801. [Download PDF](#)
305. Matthies, S., Merkel, S., Wenk, H.-R., Hemley, R.J., Mao H.-k. (2001). Effects of texture on the determination of elasticity of polycrystalline e-iron from diffraction measurements. *Earth Planet. Sci. Lett.* 194, 201-212. [Download PDF](#)
304. Monteiro, P.J.M., Shomglin, K., Wenk, H.-R., Hasparyk, N.P. (2001). Effect of aggregate deformation on alkali-silica reaction. *Am. Concr. Institute, Materials Journal* 98, 179-183.
303. Wenk, H.-R., Cont, L., Xie, Y., Lutterotti, L., Ratschbacher, L., Richardson, J. (2001). Rietveld texture analysis of Dabie Shan eclogite from TOF neutron diffraction spectra. *J. Appl. Cryst.* 34, 442-453. [Download PDF](#)
302. Barber D.J., Wenk, H.-R. (2001). Slip and dislocation behaviour in dolomite. *Europ. J. Mineral.* 13, 221-243. [Download PDF](#)

301. Pieri, M., Burlini, K. L., Stretton, I., Olgaard, D.L., Burg, J-P. Wenk, H.-R. (2001). Texture development of calcite by deformation and dynamic recrystallization at 1000K during torsion experiments of marble to large strains. *Tectonophysics* 330, 119-140. [Download PDF](#)
300. Buffett, B., Wenk, H.-R. (2001). Texturing of the inner core by Maxwell stresses. *Nature* 413, 60-63. [Download PDF](#)
299. Wenk, H.-R., Matthies, S., Hemley, R.J., Mao, H.-K., Shu, J. (2000). The plastic deformation of iron at pressures of the Earth's inner core. *Nature* 405, 1044-1047. [Download PDF](#)
298. Hughes, D.A., Lebensohn, R., Wenk, H.-R., Kumar, A. (2000). Stacking fault energy and microstructure effects on torsion texture evolution. *Proc. R. Soc. Lond. A* 456 (1996), 921-953 [doi:10.1098/rspa.2000.0543] [Download PDF](#)
297. Wenk, H.-R., Baumgardner, J., Lebensohn, R., Tome, C. (2000). A convection model to explain anisotropy of the inner core. *J. Geophys. Res.* 105, 5663-5677. [Download PDF](#)
296. Dawson, P. R., Wenk, H.-R. (2000). Texturing of the upper mantle during convection. *Phil. Mag. A* 80, 573-598 [doi:10.1080/01418610008212069] [Download PDF](#)
295. Hacker, B. R., Ratschbacher, L., Webb, L., McWilliams, M.O., Ireland, T., Calvert, A., Dong, S., Wenk, H.-R., Chateigner, D. (2000). Exhumation of ultrahigh-pressure continental crust in east central China: Late Triassic-Early Jurassic tectonic unroofing. *J. Geophys. Res.* 105, 13,339-13,364. [Download PDF](#)
294. Ratschbacher, L., Hacker, B. R., Webb, L., McWilliams, M.O., Ireland, T. Dong, S., Calvert, A., Chateigner, D., Wenk, H.-R. (2000). Exhumation of ultrahigh-pressure continental crust in east central China: Cretaceous and Cenozoic unroofing and the Tan- Lu fault. *J. Geophys. Res.* 105, 13,303-13,338. [Download PDF](#)
293. Wenk, H.-R., Johnson, L.R., Ratschbacher, L. (2000). Pseudotachylites in the eastern Peninsular ranges of California. *Tectonophysics* 321, 253-277. [Download PDF](#)
292. Chateigner, D., Hedegaard, C., Wenk, H.-R. (2000). Mollusc shell microstructures and crystallographic textures. *J. Struct. Geol.* 22, 1723-1735. [Download PDF](#)
291. Heidelberg, F., Kunze, K., Wenk, H.-R. (2000). Texture analysis of a recrystallized quartzite using electron diffraction in the scanning electron microscope. *J. Struct. Geol.* 22, 91-104. [Download PDF](#)
290. Bennett, K., Von Dreele, R.B., Wenk (1999). HIPPO a new high intensity neutron diffractometer for bulk analysis of materials. *Int. U. Crystallogr. Comm. Powder Diffraction Newsletter* 22, 6-8.
289. Wenk, H.-R. (1999). Texture analysis of Earth materials. Comparison of EBSD with other diffraction techniques. *Microscopy and Analysis* 5, Suppl. 2, 228-229.
288. Lutterotti, L., Matthies, S., Wenk, H.-R., (1999). MAUD (Material Analysis Using Diffraction): A user friendly Java program for Rietveld texture analysis and more. *Proc. 12th Int. Conf. On Textures of Materials*. J.A. Szpunar Ed., NRC Research Press, Ottawa, 1599-1604.
287. Takeshita, T., Wenk, H.-R., Lebensohn, R. (1999). Comparison of natural and simulated quartz shear texture. *Proc. 12th Int. Conf. On Textures of Materials*. J.A. Szpunar Ed., NRC Research Press, Ottawa, 1534-1539.

286. Chateigner, D., Hedegaard, C., Wenk, H.-R. (1999). Quantitative characterization of mollusc shell textures. Proc. 12th Int. Conf. On Textures of Materials. J.A. Szpunar Ed., NRC Research Press, Ottawa, 1495-1500.
285. Wenk, H.-R. (1999). Modeling of dynamic recrystallization in minerals. Proc. 12th Int. Conf. On Textures of Materials. J.A. Szpunar Ed., NRC Research Press, Ottawa, 364- 368.
284. Wenk, H.-R., Donovan, J.J., Xie, Y., Johnson, G.C., Toker, E. (1999). Texture analysis with a digital SEM-EBSD system. Proc. 12th Int. Conf. On Textures of Materials. J.A. Szpunar Ed., NRC Research Press, Ottawa, 235-240.
283. Bennett, K., Von Dreele, R.B., Wenk, H.-R. (1999). HIPPO, a new high intensity neutron diffractometer for characterization of bulk materials. Proc. 12th Int. Conf. On Textures of Materials. J.A. Szpunar Ed., NRC Research Press, Ottawa, 129-134.
282. Wenk, H.-R., Dawson, P.R. (1999). From crystal orientations to material properties: Micro-macro linkage illustrated with deformation in the Earth. Proc. 12th Int. Conf. On Textures of Materials. J.A. Szpunar Ed., NRC Research Press, Ottawa, 3-5.
281. Tomé, C.N., Wenk, H.-R. (1999). Modeling dynamic recrystallization of geologic aggregates. 4th Int. Conf. On Recrystallization and related Phenomena, Edit. T. Sakai and H.G. Suzuki. The Japan Inst. Metals, 665-670.
280. Solas, D.E., Tomé, C.N., Engler, O., Wenk, H.-R. (1999). A coupled Monte Carlo and n- site self-consistent approach to model static recrystallization. 4th Int. Conf. On Recrystallization and related Phenomena, Edit. T. Sakai and H.G. Suzuki. The Japan Inst. Metals, 639-644.
279. Lutterotti, L., Matthies, S., Wenk, H.-R. (1999). MAUD: a friendly Java program for materials analysis using diffraction. Int. U. Crystallogr. Comm. Powder Diffraction Newsletter 21, 14-15.
278. Matthies, S., Lutterotti, L., Ullemeyer K., Wenk, H.-R. (1999). Texture analysis of quartzite by whole pattern deconvolution. Texture and Microstructures 33, 139-149.
277. Wenk, H.-R., Tomé C. (1999). Simulation of deformation and recrystallization of olivine deformed in simple shear. J. Geophys. Res. 104, 25,513-25,527. [Download PDF](#)
276. Takeshita, T., Wenk, H.-R., Lebensohn, R. (1999). Development of preferred orientation and microstructure in sheared quartzite: comparison of natural and simulated data. Tectonophysics 312, 133-155. [Download PDF](#)
275. Chateigner, D., Wenk, H.-R., Pernet, M. (1999). Orientation distributions of low symmetry polyphase materials using neutron diffraction data: application to a rock composed of quartz, biotite and feldspar. Textures and Microstructures 33, 35-43.
274. Heidelberg, F., Riekel, C., Wenk, H.-R. (1999). Quantitative texture analysis of small domains with synchrotron x-rays. J. Appl. Cryst. 32, 841-849. [Download PDF](#)
273. Wenk, H.-R. (1999). A voyage through the deformed Earth with the self-consistent model. Model. Simul. Mater. Sci. Engin., 7, 699-722. [Download PDF](#)
272. Janney, D.E., Wenk, H.-R. (1999). Peristerite exsolution in metamorphic plagioclase from the Lepontine Alps: An analytical and transmission electron microscope study. Amer. Mineral. 84, 517-527. [Download PDF](#)

271. Wenk, H.-R. Heidelberg, F. (1999). Crystal alignment of carbonated apatite in bone and calcified tendon: Results from quantitative texture analysis. *Bone* 24, 361-369. [Download PDF](#)
270. Cady, S.L., Wenk, H.-R., Sintubin, M. (1998). Microfibrous quartz varieties: characterization by quantitative x-ray texture analysis and transmission electron microscopy. *Contrib. Mineral. Petrol.* 130, 320-335. [Download PDF](#)
269. Medrano, M. D., Evans, H.T., Wenk, H.-R., Piper, D.Z. (1998). Phosphovanadylite: a new vanadium phosphate mineral with a zeolite-type structure. *American Mineral.* 83, 889- 895. [Download PDF](#)
268. Wenk, H.-R (1998). Deformation of mylonites in Palm Canyon, California, based on xenolith geometry. *J. Struct. Geol.* 20, 559-571. [Download PDF](#)
267. Hedegaard, C., Wenk, H.-R. (1998). Microstructure and texture patterns of mollusc shells. *J. Mollusc. Studies* 64, 133-136. [doi:10.1093/mollus/64.1.133] [Download PDF](#)
266. Lebensohn, R. A., Wenk, H.-R., Tomé, C. (1998). Modelling deformation and recrystallization textures in calcite. *Acta mater.* 46(8), 2683-2693. [Download PDF](#)
265. Chateigner, D., Wenk, H.-R., Patel, A., Todd, M., Barber, D.J. (1998). Analysis of preferred orientations in PST and PZT thin films on various substrates. *Ferroelectrics* 19, 121-140.
264. Wenk, H.-R., Matthies, S., Donovan, J., Chateigner, D. (1998). BEARTEX, a Windows- based program system for quantitative texture analysis. *J. Appl. Cryst.* 31, 262-269. [Download PDF](#)
263. Pearson, A., Heidelberg, F., Wenk, H.-R. (1997). Texture analysis of quartz in a granite mylonite by EBSD-orientation imaging microscopy. *Textures and Microstructures* 29, 185-199.
262. Bennett, K., Wenk, H.-R., Durham, W.B., Stern, L.A., Kirby, S.H. (1997). Preferred crystallographic orientation in the ice I-II transformation and the flow of ice II. *Phil. Mag. A*, 76, 413-435. [Download PDF](#)
261. Wenk, H.-R. (1997). From single crystals and powders to polycrystals: Quantitative texture analysis. *The Rigaku J.* 14, 1-3.
260. Wenk, H.-R., Canova, G., Brechet, Y., Flandin, L. (1997). A deformation-based model for recrystallization of anisotropic materials. *Acta mater.* 45(8), 3283-3296. [Download PDF](#)
259. Wenk, H.-R. (1996). A deformation-based model of dynamic recrystallization applied to quartz. In *Tectonics and Metamorphism (The Hara Volume)*. p. 280-286. Soubun Co. Ltd., Tokyo.
258. Wenk, H.-R., Heidelberg, F., Chateigner, D., Zontone, F. (1997). Laue orientation imaging. *J. Synchr. Rad.* 4, 95-101.
257. Wenk, H.-R., Chateigner, D., Pernet, M., Bingert, J., Hellstrom, E., Ouladdiaf, B. (1996). Texture analysis of Bi-2212 and 2223 tapes and wires by neutron diffraction. *Physica C* 272, 1-12.
256. Chateigner, D., Wenk, H.-R., Pernet, M. (1997). Orientation analysis of bulk YBCO from incomplete neutron diffraction data. *J. Appl. Cryst.* 30, 43-48. [Download PDF](#)
255. Matthies, S., Lutterotti, L., Wenk, H.-R. (1997). Advances in texture analysis from diffraction spectra. *J. Appl. Cryst.* 30, 31-42. [Download PDF](#)

254. Lutterotti, L., Matthies, S., Wenk, H.-R., Schultz, A.J., Richardson, J.W. (1997). Combined texture and structure analysis of deformed limestone from time-of-flight neutron diffraction spectra. *J. Appl. Phys.* 81, 594-600. [Download PDF](#)
253. Ferrari, M., Lutterotti, L., Matthies, S., Polonioli, P., Wenk, H.-R. (1996). New opportunities in the texture and stress field by whole pattern analysis. *Mater. Sci. Forum.* 228-231, 83-88.
252. Blackman, D.K., Kendall, J.-M., Dawson, P.R., Wenk, H.-R., Boyce, D., Morgan, J.P. (1996). Teleseismic imaging of subaxial flow at mid-ocean ridges: travel-time effects of anisotropic mineral texture in the mantle. *Geoph. J. Intern.* 127(2), 415-426. [Download PDF](#)
251. Cady, S.L., Wenk, H.-R., Downing, K.H. (1996). HRTEM of microcrystalline opals in chert and porcelanite from the Monterey Formation, California. *Am. Mineral.* 81, 1380-1395. [Download PDF](#)
250. Chateigner, D., Hedegaard, C., Wenk, H.-R. (1996). Texture analysis of a gastropod shell: *Cyprea testudinaria*. In *Textures of Materials, Proc. ICOTOM 11* (Z. Liang, L. Zuo and Y. Chu Eds.), 1221-1226, Intern. Academic Publ., Beijing.
249. Wenk, H.-R. (1996). Mineral textures as diagnostic tools. In *Textures of Materials, Proc. ICOTOM 11* (Z. Liang, L. Zuo and Y. Chu Eds.), 1201-1208, Intern. Academic Publ., Beijing
248. Brunet, F., Germi, P., Pernet, M., Wenk, H.-R. (1996). Effect of boron doping on the texture and the microstructure of diamond films. In *Textures of Materials, Proc. ICOTOM 11* (Z. Liang, L. Zuo and Y. Chu Eds.), 1105-1110, Intern. Academic Publ., Beijing.
247. Wenk, H.-R., Chateigner, D., Pernet, M., Ouladdiaf, B. (1996). Neutron diffraction texture analysis of Bi2212 and 2223 tapes and wires. In *Textures of Materials, Proc. ICOTOM 11* (Z. Liang, L. Zuo and Y. Chu Eds.), 1070-1073, Intern. Academic Publ., Beijing.
246. Wenk, H.-R., Matthies, S., Donovan, J. (1996). BEARTEX, a windows-based program system for quantitative texture analysis. In *Textures of Materials, Proc. ICOTOM 11* (Z. Liang, L. Zuo and Y. Chu Eds.), 212-217, Intern. Academic Publ., Beijing.
245. Pospiech, J., Jura, J., Wenk, H.-R. (1996). Methods of series expansion and direct methods analysed with individual orientation data. In *Textures of Materials, Proc. ICOTOM 11* (Z. Liang, L. Zuo and Y. Chu Eds.), 158-163, Intern. Academic Publ., Beijing.
244. Matthies, S., Lutterotti, L., Wenk, H.-R. (1996). Progress in combining Rietveld and QTA algorithms on advanced level. In *Textures of Materials, Proc. ICOTOM 11* (Z. Liang, L. Zuo and Y. Chu Eds.), 146-151, Intern. Academic Publ., Beijing.
243. Backstrom, S.P., Riekel, C., Abel, S., Lehr, H., Wenk, H.-R. (1996). Micro-texture analysis by synchrotron x-ray diffraction of nickel-iron alloys prepared by microelectroplating. *J. Appl. Cryst* 29, 118-124. [Download PDF](#)
242. Heidelberg, F., Wenk, H.-R., Chen, S.R., Pospiech, J., Wright, S.I. (1996). Orientation and misorientation characteristics of annealed, rolled and recrystallized copper. *Mat. Sci. Eng.* A215, 39-49.
241. Wenk, H.-R., Chakmuradyan, A., Foltyn, S. (1996). Quantitative texture measurements of YBCO films on various substrates. *J. Mater. Res.* A205, 9-22. [Download PDF](#)
240. Sintubin, M., Wenk, H.-R., Phillips, D.S. (1995). Texture Development in platy materials: comparison of Bi2223 aggregates with phyllosilicate fabrics. *Mat. Sci. Eng.* A202, 157- 171.

239. Goodwin, L.B., Wenk H.-R. (1995). Development of phyllonite from granodiorite: Mechanisms of grain-size reduction in the Santa Rosa mylonite zone, California. *J. Struct. Geol.* 17(5), 689-707. [Download PDF](#)
238. Walther, K., Heinitz, J., Ullemeyer, K., Betzl, M., Wenk H.-R. (1995). TOF texture analysis of limestone standard: Dubna results. *J. Appl. Cryst.* 28, 503-507. [Download PDF](#)
237. Karato, S., Zhang, S., Wenk, H.-R. (1995). Superplasticity in Earth's lower mantle: Evidence from seismic anisotropy and rock physics. *Science* 270, 458-461.
236. Vasconcelos, P.M., Renne, P.R., Becker, T.A., Wenk, H.-R. (1995). Mechanisms and kinetics of atmospheric, radiogenic and nucleogenic argon release from cryptomelane during $^{40}\text{Ar}/^{39}\text{Ar}$ analysis. *Geochim. and Cosmochim. Acta* 59(10), 2057-2070. [Download PDF](#)
235. Wenk, H.-R., McLaren, A. C., Drits, V. A., Pennock, G. (1995). Electron microscopy of minerals. Chapter in: *Advanced Mineralogy*, A. Marfunin Ed., Vol. 2, 264-298, Springer Verlag.
234. Wenk, H.-R. (1994). Preferred orientation patterns in deformed quartzites. In *Reviews in Mineralogy Vol. 29, Silica Minerals* (Heaney et al. Eds.), 177-208. Mineral. Soc. Amer., Washington DC.
233. Heidelberg, F., Pospiech, J., Wenk, H.-R. (1994). Analysis of misorientation characteristics in annealed and deformed copper. *Proc. ICOTOM 10, Mater. Sci. Forum* 157-162, 965- 970.
232. Kunze, K., Adams, B.L., Heidelberg, F., Wenk, H.-R. (1994). Local microstructural investigations in recrystallized quartzite using orientation imaging microscopy. *Proc. ICOTOM 10, Mater. Sci. Forum* 157-162, 1243-1250.
231. Wenk, H.-R., Matthies, S., Lutterotti, L. (1994). Texture analysis from diffraction spectra. *Proc. ICOTOM 10, Mater. Sci. Forum* 157-162, 473-479.
230. Wenk, H.-R. (1994). Texture analysis with TOF neutrons. In: *Time-of-Flight Diffraction at Pulsed Neutron Sources* (J.D. Jorgensen and A.J. Schultz. Edts.), *Trans. Am. Cryst. Ass.* 29, 95-108.
229. Bennett, K., Wenk, H.-R., Durham, W.B., Choi, C.S. (1994). Texture analysis of high-pressure low-temperature ice polycrystals: a study by neutron diffraction. In: *Textures in Geological Materials* (H.J. Bunge et al. Eds.). *Deutsch. Gesell. Metallkunde*, Oberursel, Germany, 251-160.
228. Helming, K., Schwarzer, R.A., Rauschenbach, B., Geier, S., Leiss, B., Wenk, H.-R., Ullemeier, K., Heinitz J. (1994). Texture estimates by means of components. *Z. Metallkunde* 85, 545-553.
227. Helming, K., Wenk, H.-R., Choi, C.S., Schaefer, W. (1994). Description of quartz textures by components. Examples from metamorphic rocks. In: *Textures in Geological Materials* (H.J. Bunge et al. Eds.). *Deutsch. Gesell. Metallkunde*, Oberursel, Germany, 303-325.
226. Kunze, K., Heidelberg, F., Wenk, H.-R., Adams B.L. (1994). Orientation imaging microscopy of calcite rocks. In: *Textures in Geological Materials* (H.J. Bunge et al. Eds.). *Deutsch. Gesell. Metallkunde*, Oberursel, Germany, 127-146.
225. Wenk, H.-R., Pawlik, K., Pospiech, J., Kallend, J.S. (1994). Deconvolution of superposed pole figures by discrete OD methods: Comparison of ADC and WIMV for quartz and calcite with trigonal crystal and triclinic specimen symmetry. *Textures and Microstructures* 22, 233-260.

224. Vasconcelos, P.M., Wenk, H.-R., Rossman, G. (1994). The Anahi ametrine mine, Bolivia. *Gems and Gemology* 30, 4-23.
223. Tullis, J., Wenk, H.-R. (1994). Effect of muscovite on the strength and lattice preferred orientations of experimentally deformed quartz aggregates. *Mat. Sci. & Eng. A175*, 209- 220.
222. Janney, D. E., Wenk, H.-R. (1994). Some typical microstructures in deformed rocks. *Mat. Sci. & Eng. A175*, 201-208.
221. Barber, D. J., Wenk H.-R. (1994). The plastic deformation of polycrystalline dolomite: Comparison of experimental results with theoretical predictions. *Mat. Sci. & Eng. A175*, 83-104.
220. Brechet, Y.J.M., Dawson, P., Embury, J.D., Gsell, C., Suresh, S., Wenk, H.-R. (1994). Recommendations on modeling polyphase plasticity: conclusions of panel discussions. *Mat. Sci. Eng. A175*, 1-5.
219. Wenk, H.-R. Editor (1994). Polyphase Polycrystal Plasticity. Special Issue: Materials Science and Engineering, *A175*, 1-277.
218. Vasconcelos, P. M., Wenk, H.-R., Echer, C. (1994). In-situ study of the thermal behavior of cryptomelane by high-voltage and analytical electron microscopy. *Amer. Mineral.* 79, 80-90. [Download PDF](#)
217. Wenk, H. R. (1994). Texture development during deformation: New results in complex systems. *Dislocations 93. Solid State Phenomena* 35-36, 45-56.
216. Evangelakakis, C., Kroll, H., Voll, G., Wenk, H.-R., Meisheng, Hu, Koepcke J. (1993). Exsolution in granulite-grade feldspars from Sri Lanka and two-feldspar geothermometry. *Contrib. Mineral. Petrol.* 114, 519-532.
215. Frisia-Bruni, S., Wenk, H.-R. (1993). TEM and AEM study of pervasive, multi-steps dolomitization of the Upper Triassic Dolomia Principale (Northern Italy), *J. Sed. Petr.* 63, 1049-1058. [Download PDF](#)
214. Kirby, S.H., Sylvester, A.G., Tullis J., Wenk, H.-R. Editors (1993). Microstructures and Rheology of Rocks and Rock-forming Minerals (John Christie Volume). Special Issue *J. Struct. Geol.* 15, 1061-1271.
213. Wenk, H.R. (1993). Rasvitie textur deformazii v gorivch porodach. *Fisika zempi* 6, 5-36.
212. Chastel, Y. B., Dawson, P. R., Wenk H.-R., Bennett K. (1993). Anisotropic convection with implications for the upper mantle. *J. Geophys. Res.* B98, 17757-17771. [Download PDF](#)
211. Erskine, B. G., Heidelbach, F., Wenk, H.-R. (1993). Lattice preferred orientations and microstructures of deformed Cordilleran marbles: correlation of shear indicators and determination of strain path. *J. Struct. Geol.* 15(9), 1189-1205. [Download PDF](#)
210. Cady, S., Wenk, H.-R., Kilaas R., Barber, D. J. (1993). Enantiomorphism and planar defects in length-fast chalcedony. In: *Defects and Processes in the Solid State: Geoscience Applications*. McLaren Volume. J.N. Boland and F.D. FitzGerald Eds. Elsevier 383-400.
209. Hirt, W. G., Wenk, H.-R., Boles, J. R. (1993). Albitization of plagioclase crystals in the Stevens Sandstone (Miocene), San Joaquin Basin, California and the Frio Formation. (Oligocene), Gulf Coast, Texas: a TEM/AEM study, *Bull. Geol. Soc. Amer.* 105, 708- 714.

208. Wenk, H.-R., Frisia-Bruni, S., Meisheng, Hu (1993). Microstructural characterization of Abu Dhabi sabkha carbonates. Evidence for early diagenetic dolomitization, *Amer. Mineral.* 78, 769-774. [Download PDF](#)
207. O'Brien, D. K., Manghnani, M. H., Tribble, J. S., Wenk, H.-R. (1992). Preferred orientation and velocity anisotropy in marine clay-bearing calcareous sediments. Chapter 11 in *Carbonate Microfabrics*, R. Rezak and D.L. Lavoie Edts. Springer Verlag, p. 149-161.
206. Canova, G. R., Wenk, H.-R., Molinari A. (1992). Deformation modelling of multiphase polycrystals: case of a quartz-mica aggregate. *Acta Metall.*, 40, 1519-1530.
205. Wenk, H.-R. (1992). A new view of mantle structure. *Geophysics News*, Am. Geoph. U. 12-13.
204. Matthies, S., Wenk, H.-R. (1992). Optimization of texture measurements by pole figure coverage with hexagonal grids. *Physica stat. solid. (a)* 133, 253-257. [doi:10.1002/pssa.2211330206]
203. Wenk, H.-R., Meisheng, Hu, Downing, K. H., Keefe, M.A.O (1992). 3D crystal structure determination of staurolite by electron crystallography. *Acta Cryst.*, A48, 700-716.
202. Wenk, H.-R. (1992). *Atlante geologico della Svizzera*, Foglio 1296, Note esplicative, 61p. Serv. idrologico e geologico nazionale, Bern, Switzerland.
201. Wenk, H.-R., Phillips, D. S. (1992). Highly textured Bi-2223 aggregates produced by cold pressing of powders. *Physica C*, 200, 105-112.
200. Wenk, H.-R. (1992). Advantages of monochromatic radiation for texture determination of superconducting thin films. *J. Appl. Cryst.*, 25, 524-530.
199. Schäfer, W., Jansen, E., P. Merz, Will, G., Wenk, H.-R. (1992). Neutron diffraction texture investigation on deformed quartzites. *Physica B* 180&181, 1035-1038.
198. Meisheng, Hu, Wenk, H.-R., Sinitsyna, D. (1992). Microstructures in natural perovskites, *Amer. Mineral.* 77, 359-373. [Download PDF](#)
197. Rollett, A. D., Wenk, H.-R., Heidelbach, F., Schofield, T. G., Muenchausen, R. E., Raistrick, I. D., Arendt, P. N., Korzekwa, D. A., Bennett, K., Kallend, J. S. (1991). Temperature-property relationships in the high temperature superconductors, *Proc. 9th Int. Conf. Texture of Materials. Textures and Microstructures* 14-18, 355-362.
196. Heidelbach, F., Wenk, H.-R., Muenchausen, R. E., Foltyn, S., Nogar, N., Rollett, A. D. (1992). Textures of laser ablated superconducting thin films of YBa₂Cu₃O_{7-d} as a function of deposition temperature. *Proc. Mat. Res. Soc.*, 7, 549-557.
195. Wenk, H.-R., Christie J. M. (1991). Review paper: Comments on the interpretation of deformation textures in rocks, *J. Struct. Geol.*, 13, 1091-1110. [Download PDF](#)
194. Wenk, H.-R. (1991). Texture evolution in minerals. Modeling and experimental results. In *Modeling the Deformation of Crystalline Solids: Physical Theory, Application, and Experimental Comparison*, T. C. Lowe, A. D. Rollett, P. S. Follensbee and G. S. Daehn (eds.), TMS-AIME, Warrendale, Pa., 349-359.
193. Wenk, H.-R. (1991). Standard project for pole figure determination by neutron diffraction, *J. Appl. Cryst.*, 24, 920-927. [Download PDF](#)

192. Wenk, H.-R., Larson, A. C., Vergamini, P. J., Schultz, A. J. (1991). TOF of pulsed neutrons and 2d detectors for texture analysis of deformed polycrystals, *J. Appl. Phys.*, 70, 2035- 2040.
191. Krulevitch, P., Nguyen, T. D., Johnson, G. C., Howe, R. T., Wenk, H.-R., Gronsky, R. (1991). LPCVD polycrystalline silicon thin films: The evolution of structure, texture and stress, *Mat. Res. Soc. Symp. Proc.* 202,
190. Huang, J., Krulevitch, P., Johnson, G. C., Howe, R. T., Wenk, H.-R. (1990). Investigation of texture and stress in undoped polysilicon films, in *Polysilicon Thin Films and Interfaces*, T. Kamiya, C. V. Thompson, B. Raicu (eds.), *Mat. Res. Soc. Symp. Proc.* 182,
189. Tomé, C., Wenk, H.-R., Canova, G., Kocks, U.F., (1991). Simulations of texture development in calcite: comparison of polycrystal plasticity theories, *J. Geophys. Res.* B96, 11865-11875.
188. Wenk, H.-R., Bennett, K., Canova, G., Molinari, A. (1991). Modelling plastic deformation of peridotite with the self-consistent theory, *J. Geophys. Res.* B96, 8337-8345. [Download PDF](#)
187. Ratschbacher, L., Wenk, H.-R., Sintubin, M. (1991). Calcite texture development in Alpine spreading nappes, *J. Struct. Geol.*, 13(4), 369-384.
186. Kallend, J.S., Kocks, U.F., Rollett, A.D., Wenk, H.-R. (1991). Operational texture analysis, *Mat. Sci. and Engin.*, A132, 1-11.
185. Wenk, E., Schwander, H., Wenk, H.-R. (1991). Microprobe analyses of plagioclase from metamorphic carbonate rocks of the Central Alps, *Europ. J. Mineral.*, 3, 181-191.
184. Barber, D.J., Wenk, H.-R. (1991). Dauphine twinning in deformed quartzites: Implications of an in situ TEM study of the α - β phase transformation, *Phys. Chem. Minerals*, 17, 492-502. [Download PDF](#)
183. Wenk, H.-R., Meisheng, Hu, Lindsey, T. (1991). Superstructures in ankerite and calcite, *Phys. Chem. Minerals*, 17, 527-539.
182. Downing, K. H., Meisheng, Hu, Wenk, H.-R., O'Keefe, M. A. (1990). Resolution of oxygen atoms in staurolite by three-dimensional transmission electron microscopy. *Nature*, 348, 525-528. [Download PDF](#)
181. D. M. Ague, H. R. Wenk, E. Wenk (1990). Deformation microstructures and lattice orientations of plagioclase in gabbros from Central Australia, *Geophys. Monogr.* 56, *The Brittle-Ductile Transition in Rocks, The Hugh Heard Volume*, 173-186.
180. A. C. Larson, P. J. Vergamini, H.-R. Wenk (1990). TOF measurements of pulsed neutrons for texture analysis of low symmetry materials, in *Neutron Scattering for Materials Science*, *Mat. Res. Soc. Symp. Proc.* 166, 337-342.
179. H. Kern, H. R. Wenk (1990). Fabric-related velocity anisotropy and shear wave splitting in rocks from the Santa Rosa mylonite zone, California, *J. Geophys. Res.*, B95, 11213- 11223. [Download PDF](#)
178. H. R. Wenk, J. Pannetier (1990). Texture development in deformed granodiorites from the Santa Rosa mylonite zone, southern California, *J. Struct. Geol.*, 12(2), 177-184. [Download PDF](#)

177. T. Takeshita, H.-R. Wenk, A. Molinari, G. Canova (1990). Simulation of dislocation assisted plastic deformation in olivine polycrystals. Chapter 14, in: *Deformation Processes in Minerals, Ceramics and Rocks*, D. J. Barber and P. G. Meredith (eds.), p. 365-376. Allen and Unwin.
176. S. J. Shaffer, J. W. Morris, Jr., H.-R. Wenk (1990). Textural characterization and its applications on zinc electrogalvanized steels, in *Zinc-based Steel Coating Systems: Metallurgy and Performance*, G. Krauss and D. K. Matlock (eds.), p. 129-140, TMS, Warrendale, Pa.
175. H.-R. Wenk, M. Sintubin, J. Huang, G. C. Johnson, R. T. Howe (1990). Texture analysis of polycrystalline silicon films, *J. Appl. Phys.*, 67, 572-574.
174. L. B. Goodwin, H. R. Wenk (1990). Intracrystalline folding and cataclasis in biotite of the Santa Rosa mylonite zone: HVEM and TEM observations, *Tectonophysics*, 172, 201-214.
[Download PDF](#)
173. H.-R. Wenk, G. Canova, A. Molinari, U. F. Kocks (1989). Viscoplastic modeling of texture development in quartzite, *J. Geophys. Res.*, B94, 17895-17906. [Download PDF](#)
172. H.-R. Wenk, G. Canova, A. Molinari, H. Mecking (1989). Texture development in halite: Comparison of Taylor model and self-consistent theory, *Acta Metall.*, 37, 2017-2029.
171. T. Takeshita, U. F. Kocks, H.-R. Wenk (1989). Strain path dependence of texture development in aluminum, *Acta Metall.*, 37, 2595-2611.
170. H.-R. Wenk, J. Pannetier, G. Bussod, A. Pechenik (1989). Preferred orientation in experimentally deformed $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$, *J. Appl. Phys.* 65, 4070-4073.
169. C. Y. Wang, C. Ruppert, T. Guo, G. A. Davis, D. Okaya, Z. Zhong, H.-R. Wenk (1989). Seismic reflectivity of the Whipple Mountain shear zone in southeastern California, *J. Geophys. Res.* B94, 2989-3005. [Download PDF](#)
168. A. Meike, H.-R. Wenk (1988). A TEM study of microstructures associated with solution cleavage in limestone, *Tectonophysics*, 154, 137-148. [Download PDF](#)
167. N. J. Nelson, P. A. Martens, J. F. Battey, H.-R. Wenk, Z. Q. Zhong (1987). The influence of texture on the etching properties of copper foil, *Proc. 8th Int. Conf. Texture of Materials*, J. Kallend and G. Gottstein (eds.), p. 933-938. TMS-AIME, Warrendale, Pa.
166. H.-R. Wenk, T. Takeshita, C. Tome, H. Kern, S. Hoefler, S. Matthies (1987). Texture development in calcite polycrystals. Theory and experiments, *Proc. 8th Int. Conf. Texture of Materials*, J. Kallend and G. Gottstein (eds.), p. 777-782. TMS-AIME, Warrendale, Pa.
165. D. A. Hughes, H.-R. Wenk (1987). The effect of stacking fault energy on the texture of nickel-cobalt solid solutions at large strains. *Proc. 8th Int. Conf. Texture of Materials*, J. Kallend and G. Gottstein (eds.), p. 455-460. TMS-AIME, Warrendale, Pa.
164. T. Takeshita, U. F. Kocks, H.-R. Wenk (1987). The path dependence of deformation texture development, *Proc. 8th Int. Conf. Texture of Materials*, J. Kallend and G. Gottstein (eds.), p. 445-448. TMS-AIME, Warrendale, Pa.
163. H.-R. Wenk, H. Kern, J. Pannetier, S. Hoefler, W. Schaefer, G. Will, H. Brokmeier (1987). Neutron diffraction: Standard project (preliminary results), *Proc. 8th Int. Conf. Texture of Materials*, J. Kallend and G. Gottstein (eds.), p. 229-234. TMS-AIME, Warrendale, Pa.

162. H.-R. Wenk, H. J. Bunge, J. S. Kallend, K. Luecke, S. Matthies, J. Pospiech, P. Van Houtte (1987). Orientation distributions. Representation and determination, Proc. 8th Int. Conf. Texture of Materials, J. Kallend and G. Gottstein (eds.), p. 17-30, TMS-AIME, Warrendale, Pa.
161. H.-R. Wenk, S. J. Shaffer, G. Van Tendeloo (1988). Planar defects in low temperature quartz, *Physica Stat. Solidi*, Amelinckx Volume, A 107, 799-805.
160. H.-R. Wenk, P.J. Vergamini, A. Larson (1988). Texture analysis by TOF measurements of spallation neutrons with a 2D position sensitive detector, *Textures and Microstructures*, 8/9, 443-456.
159. R. J. Detwiler, P. J. M. Monteiro, H.-R. Wenk, Z. Zhong (1988). Texture of calcium hydroxide near the cement paste-aggregate interface, *Cement and Concrete Research*, 18, 823-829.
158. S. Matthies, H.-R. Wenk, G. W. Vinel (1988). Some basic concepts of texture analysis and comparison of three methods to calculate orientation distributions from pole figures, *J. Appl. Crystall.* 21, 285-304.
157. A. Meike, H.-R. Wenk, M.A. O'Keefe, R. Gronsky (1988). Atomic resolution microscopy of carbonates. Interpretation of contrast, *Phys. Chem. Minerals*, 15, 427-437.
156. H.-R. Wenk, T. Takeshita, R. Jeanloz, G. C. Johnson (1988). Development of texture and elastic anisotropy during deformation of hcp metals, *Geophys. Res. Lett.*, 15, 76-79.
155. R. Jeanloz, H.-R. Wenk (1988). Convection and anisotropy of the inner core, *Geophys. Res. Lett.* [Download PDF](#)
154. T. Takeshita, H.-R. Wenk (1988). Plastic anisotropy and geometric hardening in quartzites, *Tectonophysics*, 149, 345-361. [Download PDF](#)
153. H.-R. Wenk, G. C. Johnson, S. Matthies (1988). Determination of physical properties from continuous orientation distributions, *J. Appl. Phys.*, 63, 2876-2879.
152. H.-R. Wenk, T. Takeshita, E. Bechler, B. Erskine, S. Matthies (1987). Pure shear and simple shear calcite textures. Comparison of experimental, theoretical and natural data, *J. Struct. Geol.*, 9(5), 731-745. [Download PDF](#)
151. T. Takeshita, C.N. Tome, H.-R. Wenk, U.F. Kocks (1987). Single crystal yield surface for trigonal lattices: Application to texture transitions in calcite polycrystals, *J. Geophys. Res.*, B92, 12,917-12,930. [Download PDF](#)
150. D.K. O'Brien, H.-R. Wenk, L. Ratschbacher, Z. You (1986). Preferred orientation of phyllosilicates in phyllonites and ultramylonites, *J. Struct. Geology*, 9(5), 719-730. [Download PDF](#)
149. H.-R. Wenk (1987). Introduction to the Geology of the Bergell Alps with Guide for Excursions, *Jber. Naturforsch. Ges. Graubunden*, 103, 29-90.
148. H.-R. Wenk, U.F. Kocks (1987). The representation of orientation distributions, *Metall. Trans.*, 18A, 1083-1092. [Download PDF](#)
147. G. Johnson, H.-R. Wenk (1986). Elastic properties of calcite polycrystals with trigonal crystal and orthorhombic specimen symmetry, *J. Appl. Phys.* 60, 3868-3875.
146. E. Wenk, H. Schwander, H.-R. Wenk (1986). Alkali feldspar and coexisting plagioclase in metamorphic carbonate rocks from the Central Alps, *N. Jb. Mineral.*, Mh., 155, 89-108.

145. H.-R. Wenk (1985). Presentation of the Roebling Medal of the Mineralogical Society of America for 1984 to Francis John Turner, *Am. Mineral.*, 71, 849-851.
144. H.-R. Wenk, H.J. Bunge, E. Jansen, J. Pannetier (1985). Preferred orientation of plagioclase-neutron diffraction and U-stage data, *Tectonophysics*, 126, 271-284.
143. H.-R. Wenk, T. Takeshita, P. Van Houtte, F. Wagner (1986). Plastic anisotropy and texture development in calcite polycrystals, *J. Geophys. Res.*, 91, 3861-3869. [Download PDF](#)
142. H.-R. Wenk, H. Kern, P. Van Houtte, F. Wagner (1986). Heterogeneous strain in axial deformation of limestone, textural evidence, in *Mineral and Rock Deformation: Laboratory and Theory, The Paterson Volume*, B.E. Hobbs and H.C. Heard (eds.), *Geophys. Monograph*, 36, 287-295.
141. J. W. McTigue, H.-R. Wenk (1985). Microstructure and orientation relationships in the dry-state aragonite-calcite and calcite-lime phase transformation, *Am. Mineral.*, 70, 1253-1261. [Download PDF](#)
140. G. Van Tendeloo, H.-R. Wenk, R. Gronsky (1985). Modulated structures in calcian dolomite: A study by electron microscopy, *Phys. Chem. Minerals*, 12(6), 333-341. [Download PDF](#)
139. H.-R. Wenk, D. O'Brien, Z. You (1985). Spherical representation of orientation distribution functions, *Physica Stat. Solidi, A* 90, K19-K24.
138. H.-R. Wenk, F. Zhang (1985). Coherent transformation in calcian dolomites, *Geology*, 13, 457-460.
137. B.G. Erskine, H.-R. Wenk (1985). Evidence for Late Cretaceous crustal thinning in the Santa Rosa Mylonite Zone, Southern California, *Geology*, 13, 274-277. [Download PDF](#)
136. H. Kern, H.-R. Wenk (1985). Anisotropy in rocks, Chapter 26, in *Preferred Orientation in Deformed Metals, and Rocks. An Introduction to Modern Texture Analysis*, pp. 537-555, Academic Press.
135. H.-R. Wenk (1985). Carbonates, Chapter 17 in *Preferred Orientation in Deformed Metals, and Rocks. An Introduction to Modern Texture Analysis*, pp. 361-384, Academic Press.
134. S. Matthies, H.-R. Wenk (1985). ODF reproduction with conditional ghost correction, Chapter 7 in *Preferred Orientation in Deformed Metals, and Rocks. An Introduction to Modern Texture Analysis*, pp. 139-147, Academic Press.
133. H. Schaeben, A. Vadon, H.-R. Wenk (1985). The vector method, Chapter 6 in *Preferred Orientation in Deformed Metals, and Rocks. An Introduction to Modern Texture Analysis*, pp. 123-137, Academic Press.
132. L.E. Weiss, H.-R. Wenk (1985). Symmetry of pole figures and textures, Chapter 3 in *Preferred Orientation in Deformed Metals, and Rocks. An Introduction to Modern Texture Analysis*, pp. 49-72, Academic Press.
131. H.-R. Wenk (1985). Measurement of pole figures, Chapter 2 in *Preferred Orientation in Deformed Metals, and Rocks. An Introduction to Modern Texture Analysis*, pp. 11-47, Academic Press.
130. L.E. Weiss, H.-R. Wenk (1985). "Introduction", Chapter 1 in *Preferred Orientation in Deformed Metals and Rocks. An Introduction to Modern Texture Analysis*, pp. 1-10, Academic Press.

129. H.-R. Wenk (1985). Edit. Preferred Orientation in Deformed Metals and Rocks. An Introduction to Modern Texture Analysis, Academic Press.
- 128a. H.-R. Wenk (1985). Introduction to the geology of the Bergell Alps with guide for excursions. Jber. Natf. Ges. Graubuenden 103, 29-90. [Download PDF](#)
128. L. Masch, H.-R. Wenk, E. Preuss (1985). Electron microscopy study of hyalomylonites - evidence for frictional melting in landslides, Tectonophysics 115, 131-160. [Download PDF](#)
127. S. Frisia-Bruni, H.-R. Wenk (1984). Replacement of aragonite by calcite in sediments from the San Cassiano Formation (Italy), J. Sedim. Petrol., 55, 159-170.
126. D.J. Barber, H.-R. Wenk (1984). Microstructures in carbonates from the Alno and Fen Carbonatites, Contrib. Mineral. Petrol., 88, 233-245. [Download PDF](#)
125. F. Wagner, H.-R. Wenk, H. Kern, P. Van Houtte (1984). Evolution of deformation textures in calcite, Proc. 7th Int. Conf. Texture of Materials, Zwirndiecht, Holland, pp. 165-171.
124. P. Van Houtte, H.-R. Wenk, F. Wagner (1984). The curling effect as a possible explanation of the uniaxial compression textures of calcite, Proc. 7th Int. Conf. Texture of Materials, Zwirndiecht, Holland, pp. 153-158.
123. H.-R. Wenk, H. Kern, H. Schaefer, G. Will (1984). Comparison of X-ray and neutron diffraction in texture analysis of carbonate rocks, J. Struct. Geology, 6(6), 687-692. [Download PDF](#)
122. H.-R. Wenk, H. Kroll (1984). Analysis of P1, I1 and C1 plagioclase structures, Bull. Mineral, 107, 467-487.
121. E. Wenk, H.-R. Wenk (1984). Distribution of plagioclase in carbonate rocks from the Tertiary metamorphic belt of the Central Alps, Bull. Mineral, 107, 357-368.
120. H.-R. Wenk (1984). Brittle-ductile transition zone in the Northern Bergell Alps, Geol. Rundschau, 73, 419-431. [Download PDF](#)
119. H.-R. Wenk, D. Zenger (1983). Sequential basal faults in Devonian dolomite, Nopah Range, Death Valley, California, Science, 222, 502-504. [Download PDF](#)
118. W.H. Oterdoom, H.-R. Wenk (1983). Ordering and composition of scapolite: field observations and structural interpretations, Contrib. Mineral. Petrol., 83, 330-341. [Download PDF](#)
117. H. Kern, H.-R. Wenk (1983). Texture development in experimentally induced ductile shear zones, Contrib. Mineral. Petrol., 83, 231-236.
116. H.-R. Wenk (1983). Mullite-sillimanite intergrowth from pelitic inclusions in Bergell tonalite, N. Jb. Mineral. Mh, 146, 1-14.
115. H.-R. Wenk, D.J. Barber, R.J. Reeder (1983). Microstructures in carbonates, in Carbonates: Mineralogy and Chemistry. Reviews in Mineralogy, 11, 301-361.
114. R.J. Reeder, H.-R. Wenk (1983). Structure refinements of some thermally disordered dolomites, Am. Mineral, 68, 769-776. [Download PDF](#)
113. J.V. Smith, H.-R. Wenk (1983). Reinterpretation of a Verzasca plagioclase: a correction, Am. Mineral., 68, 742-743.

112. L.E. Weiss, H.-R. Wenk (1983). Experimentally produced pseudotachylite-like veins in gabbro, *Tectonophysics*, 96, 299-310. [Download PDF](#)
111. W. Popendorf, H.-R. Wenk (1983). Chrysotile asbestos in a vehicular recreation area: A case study, in *Environmental Effects of Off-Road Vehicles - Impacts and Management in Arid Regions*, R.H. Webb and H.G. Wilshire (eds.) Springer-Verlag, New York- Heidelberg-Berlin, 375-396.
110. W. Popendorf, A. Pryor, H.-R. Wenk (1982). Mineral dust in manual harvest operations, *Ann. Am. Conf. Govern. Ind. Hyg. (Agricultural Respiratory Hazards Symposium)*, 2, 101-115.
109. H.-R. Wenk (1982). Workshop on deformation mechanisms and texture development in rocks, in *Issues in Rock Mechanics*, R.E. Goodman and F.E. Heuze (eds.), *Am. Inst. Mining Eng.*, Denver, 405-419.
108. H.-R. Wenk (1982). A geological history of Bergell granite and related rocks, in *Transformists' Petrology*, F.K. Drescher-Kaden and S.S. Augsthitthis (eds.), 113-148, Theophrastus Publications SA, Athens.
107. H.-R. Wenk, L.E. Weiss (1982). Al-rich calcic pyroxene in pseudotachylite: an indicator of high pressure and high temperature? *Tectonophysics*, 84, 329-341. [Download PDF](#)
106. F. Wagner, H.-R. Wenk, H. Kern, P. Van Houtte, C. Esling (1982). Development of preferred orientation in plane strain deformed limestone. Experiment and theory, *Contrib. Mineral. Petrol.*, 80, 132-139. [Download PDF](#)
105. H.J. Bunge, H.-R. Wenk, J. Pannetier (1982). Neutron diffraction texture analysis using a 2D position sensitive detector, *Textures and Microstructures*, 5, 153-170. [Download PDF](#)
104. A. Vadon, H.-R. Wenk, D. Ruer, R. Baro (1981). An application of the vector method on calcite samples, *Proc. 6th Int. Conf. Texture of Materials*, 2, Iron and Steel Inst., Tokyo, Japan, 1323-1333.
103. F. Wagner, H.-R. Wenk, C. Esling, H.J. Bunge (1981). Determination of the odd part of the ODF for some geological specimens (calcite marble), *Proc. 6th Int. Conf. Texture of Materials*, 2, Iron and Steel Inst., Tokyo, Japan, 1038-1048.
102. H.-R. Wenk, H. Kern, F. Wagner (1981). Texture development in experimentally deformed limestones, in *Deformation of Polycrystals: Mechanisms and Microstructures*, *Proc. 2nd Riso International Symposium on Metallurgy and Materials Science*, 235-245.
101. F. Wagner, H.-R. Wenk, C. Esling, H.J. Bunge (1981). Importance of odd coefficients in texture calculation for trigonal-triclinic symmetries, *Phys. Status Solidi A* 67, 269-285.
100. D.J. Barber, H.C. Heard, H.-R. Wenk (1981). Deformation of dolomite single crystals from 200-800C, *Phys. Chem. Minerals*, 7, 271-286. [Download PDF](#)
099. R.M. Bailey, H.-R. Wenk (1982). Observations of microcrystalline plagioclase spherulites with the transmission electron microscope, *Textures and Microstructures*, 5, 63-70.
098. H.-R. Wenk, E. Wenk (1981). Discussion: Metamorphic bathozones and bathograds: A measure of the depth of post-metamorphic uplift and erosion on the regional scale, by D.M. Carmichael, *Am. J. Sci.*, 281, 661-662.
097. S. Gunderson, H.-R. Wenk (1981). Heterogeneous microstructures in oolitic carbonates, *Am. Mineral.*, 66, 789-800.

096. H.-R. Wenk (1981). The crystal structures of yttrium, holmium and erbium formate dihydrates, *Zeitschr. Krist.*, 154, 137-145.
095. H.-R. Wenk, F. Wagner, C. Esling, H.J. Bunge (1981). Texture representation of deformed dolomite rocks, *Tectonophysics*, 78, 119-138.
094. H.-R. Wenk (1980). More porphyritic dikes in the Bergell Alps, *Schweiz. mineral. petrog. Mitt.*, 60, 145-152. [Download PDF](#)
093. H.-R. Wenk (1980). Defects along kyanite-staurolite interfaces, *Am. Mineral.*, 65, 766-769. [Download PDF](#)
092. R.A. Marino, H.-R. Wenk, J.A. Apps, S.M. Klainer (1980). Proposed applications of NQR techniques to the geosciences, *J. Molec. Structure*, 58, 445-457.
091. J. Wallace, H.-R. Wenk (1980). Structure variation in low cordierites, *Am. Mineral.*, 65, 96-111. [Download PDF](#)
090. T. Tagai, W. Joswig, M. Korekawa, H.-R. Wenk (1980). Die Bestimmung der Al/Si-Verteilung mittels Neutronenbeugung in einem Plagioklas An_{66} , *Zeitschr. Krist.*, 151, 77- 89.
089. H.-R. Wenk, W. Joswig, T. Tagai, M. Korekawa, B. Smith (1980). The average structure of intermediate plagioclase An_{65} , *Am. Mineral.*, 65, 81-95. [Download PDFxx](#)
088. H.-R. Wenk, Y. Nakajima (1980). Formation and decomposition of APB-structures in calcic plagioclase, *Phys. Chem. Minerals.*, 6, 169-186. [Download PDF](#)
087. H.-R. Wenk, Y. Nakajima (1979). Periodic superstructures in calcic plagioclase, in *Modulated Structures - 1979* (Kailua Kona, Hawaii), M.M. Cowley et al. (eds.), AIP Conf. Proc. 53, 317-320.
086. M. Korekawa, W. Horst, T. Tagai, W. Joswig, H.-R. Wenk (1979). Structure determination of plagioclase (labradorite): I. Al/Si distribution of an An_{66} (neutron diffraction); II. Superstructure of an An_{54} (X-ray diffraction), in *Modulated Structures - 1979* (Kailua Kona, Hawaii), M.M. Cowley et al. (eds.), AIP Conf. Proc. 53, 311-313.
085. H.-R. Wenk (1979). An albite-anorthite assemblage in low-grade amphibolite facies rocks, *Am. Mineral.*, 64, 1294-1299. [Download PDF](#)
084. D.J. Barber, H.-R. Wenk (1979). Deformation twinning in calcite, dolomite, and other rhombohedral carbonates, *Phys. Chem. Minerals*, 5, 141-165. [Download PDF](#)
083. H.-R. Wenk (1979). *Elektronia Mikroskopia B Mineralogii* (Russian translation), MIR, Moscow, 541 pp.
082. R. Rinaldi, H.-R. Wenk (1979). Stacking variations in cancrinite minerals, *Acta Cryst.*, A35, 825-828.
081. W.C. Cooper, J. Murchio, W.J. Poppendorf, H.-R. Wenk (1979). Chrysotile asbestos in a California recreational area, *Science*, 206, 685-688.
080. R. Page, H.-R. Wenk (1979). Phyllosilicate alteration of plagioclase studied by transmission electron microscopy, *Geology*, 7, 393-397. [Download PDF](#)
079. H.-R. Wenk (1979). Some roots of experimental rock deformation, *Bull. Mineral. & Cryst.*, 102, 195-202.

078. H.-R. Wenk (1979). Superstructure variation in metamorphic intermediate plagioclase, *Am. Mineral.*, 64, 71-76. [Download PDF](#)
077. D.J. Barber, H.-R. Wenk (1979). On geological aspects of calcite microstructure, *Tectonophysics*, 54, 45-60.
076. R.J. Reeder, H.-R. Wenk (1979). Microstructures in low temperature dolomites, *Geophys. Res. Lett.*, 6, 77-80.
075. R.J. Reeder, H.-R. Wenk (1979). Modulated structures in sedimentary dolomites, in *Modulated Structures - 1979 (Kailua-Kona, Hawaii)*, J.M. Cowley et al. (eds.), A.I.P. Conf. Proc., 330-332.
074. H.-R. Wenk, R. Maurizio (1978). Kutnahorite, a rare Mn mineral from Piz Cam (Bergell Alps), *Schweiz. mineral. petrog. Mitt.*, 58, 97-100. [Download PDF](#)
073. H.-R. Wenk (1978). The electron microscope in Earth Sciences, in *Electron Microscopy, Proc. 9th Intl. Cong. on Electron Microscopy, Toronto*, 3, 404-419.
072. H.-R. Wenk (1978). Preferred orientation in deformed rocks. Review and outlook, *Proc. 5th Int. Conf. Texture of Materials*, 2, Springer-Verlag, Heidelberg, 47-83.
071. H.-R. Wenk (1978). Are pseudotachylites products of fracture or fusion? *Geology*, 6, 507-511. [Download PDF](#)
070. W.F. Mueller, H.-R. Wenk (1978). Mixed layer characteristics of real humite structures, *Acta Cryst.*, A34, 607-609.
069. C.S. Rainey, H.-R. Wenk (1978). Intensity differences of subsidiary reflections in intermediate plagioclase, *Am. Mineral.*, 63, 124-131. [Download PDF](#)
068. H.-R. Wenk (1978). Ordering of the intermediate plagioclase structure during heating, *Am. Mineral.*, 63, 132-135.
067. H.-R. Wenk, S.C. Cornelius (1978). *Geologischer Atlas der Schweiz, Blatt Sciora 1296 Atlasblatt 70*, Schweiz. Geol. Komm. Basel.
066. H.-R. Wenk, J. Hsiao, G. Flowers, M. Weibel, A. Ayranci (1977). A geochemical survey of granitic rocks in the Bergell Alps, *Schweiz. mineral. petrog. Mitt.*, 57, 233-265, [Download PDF](#)
065. E. Wenk, H.-R. Wenk (1977). An-variation and intergrowths of plagioclases in banded metamorphic rocks from Val Carecchio (Central Alps), *Schweiz. mineral. petrog. Mitt.*, 57, 41-57. [Download PDF](#)
064. D.J. Barber, H.C. Heard and M.S. Paterson, H.-R. Wenk (1977). Stacking faults in dolomite, *Nature*, 269, 789-790. [Download PDFxx](#)
063. H.-R. Wenk, R.N. Biagioni, J. Hsiao, D.L. Lee, F.L. Tanzella, S.M. Yeh, K. Hodgson, H.U. Nissen (1976). Deerite (Fe, Mn)₁₂ Si₈(O, OH)₃₂, yet another type of chain silicate, *Naturwissenschaften*, 63, 433-434.
062. K. Seshan, H.-R. Wenk (1976). Identification of faults in asbestos minerals and application to pollution studies, *EMSA, Miami Meeting*, 616-617.
061. H.J. Bunge, H.-R. Wenk (1977). Three-dimensional texture analysis of three quartzites (trigonal crystal and triclinic specimen symmetry), *Tectonophysics*, 40, 257-285. [Download PDF](#)

060. J. Hauser, H.-R. Wenk (1976). Optical properties of composite material (microtwins, exsolution lamellae, solid solution), *Zeitschr. Krist.*, 143, 188-219.
059. J. Barber, H.-R. Wenk (1976). Defects in deformed calcite and carbonate rocks, in, *Electron Microscopy in Mineralogy*, H.-R. Wenk et al. (eds.), Springer-Verlag, Berlin-Heidelberg-New York, 428-442.
058. H.-R. Wenk, W.F. Müller, N.A. Liddell, P.P. Phakey (1976). Polytypism in wollastonite, in *Electron Microscopy in Mineralogy*, H.-R. Wenk et al. (eds.), Springer-Verlag, Berlin-Heidelberg-New York, 324-331.
057. N. A. Liddell, P.P. Phakey, H.-R. Wenk (1976). The microstructure of some naturally deformed quartzites, in, *Electron Microscopy in Mineralogy*, H.-R. Wenk et al. (eds.), Springer-Verlag, Berlin-Heidelberg-New York, 419-427.
056. H.-R. Wenk (1976). Introduction, in, *Electron Microscopy in Mineralogy*, H.-R. Wenk et al. (eds.), Springer-Verlag, Berlin-Heidelberg-New York, 4-17.
055. H.-R. Wenk (coordinating ed.) (1976). *Electron Microscopy in Mineralogy*, Springer-Verlag, Berlin-Heidelberg-New York, 564 pp.
054. E. Wenk, H.-R. Wenk, A. Glauser, H. Schwander (1975). Andesine-labradorite intergrowth in marbles from the Central Alps, *Contrib. Mineral. Petrol.*, 53, 311-326. [Download PDF](#)
053. H.-R. Wenk, C.-Y. Wang, W. Lin (1975). The effects of water and pressure on velocities of elastic waves in a rock with oriented microcracks, *J. Geophys. Res.*, 80, 1065-1069.
052. H.-R. Wenk, J. Shore (1975). Preferred orientation in experimentally deformed dolomite, *Contrib. Mineral. Petrol.*, 50, 115-126. [Download PDF](#)
051. D.J. Barber, H.-R. Wenk (1974). High-voltage electron microscopy of deformed calcite and limestones, *Proc. 8th Intl. Congr. Electron-microscopy*, Canberra, 1, 480-481.
050. N.A. Liddell, P. P. Phakey, H.-R. Wenk (1974). TEM-investigation of some quartzites from the Bergell Alps, *Proc. 8th Intl. Congr. Electron-microscopy*, Canberra, 1, 476-477.
049. H.-R. Wenk (1974). Two episodes of high-grade metamorphism in the Northern Bergell Alps, in, *Alpine Metamorphism*, Schweiz. mineral. petrog. Mitt., 54, 555-565.
048. H.-R. Wenk, E. Wenk, J. Wallace (1974). Metamorphic mineral assemblages in pelitic rocks of the Bergell Alps, in, *Alpine Metamorphism*, Schweiz. mineral. petrog. Mitt., 54, 507-554.
047. H.-R. Wenk, W.F. Müller, G. Thomas (1974). Antiphase domains in lunar plagioclase, *Proc. 4th Lunar Sci. Conf., Suppl. 4, Geochim. Cosmochim. Acta*, 1, 909-923.
046. H.-R. Wenk (1974). Howieite, a new type of chain silicate, *Am. Mineral.*, 59, 86-97. [Download PDF](#)
045. H.-R. Wenk (1973). The crystal structure of howieite, *Naturwissenschaften*, 60, 254-255.
044. L. Johnson, H.-R. Wenk (1974). Anisotropy of physical constants in metamorphic rocks, *Tectonophysics*, 23, 79-98. [Download PDF](#)
- 043a. D.J. Barber, H.-R. Wenk (1973). The microstructure of experimentally deformed limestones. *J. Materials Science* 8, 500-508.
043. H.-R. Wenk (1973). The structure of the Bergell Alps, *Eclogae Geol. Helv.*, 66, 255-291. [Download PDF](#)

042. H.-R. Wenk, W.R. Wilde (1973). Chemical anomalies of lunar plagioclase, described by substitution vectors and their relation to optical and structural properties, *Contrib. Mineral. Petrol.*, 41, 89-104. [Download PDF](#)
041. W.F. Müller, H.-R. Wenk, W. Bell, G. Thomas (1973). Analysis of displacement vectors of antiphase domain boundaries in anorthites ($\text{CaAl}_2\text{Si}_2\text{O}_8$), *Contrib. Mineral. Petrol.*, 40, 63-74. [Download PDF](#)
040. W.F. Müller, H.-R. Wenk (1973). Changes in the domain structure of anorthite produced by heating, *N. Jb. Miner. Mh.*, 17-26.
039. H.-R. Wenk (1973). Four new structure refinements of olivine, *Zeitschr. Krist.*, 137, 86- 105.
038. H.-R. Wenk (1973). The structure of wenkite, *Zeitschr. Krist.*, 137, 113-126. [Download PDF](#)
037. H.-R. Wenk, M. Ulbrich, W.F. Müller (1972). Lunar plagioclase (a mineralogical study), *Proc. 3rd Lunar Sci. Conf., Suppl. 3, Geochim. Cosmochim. Acta*, 1, 569-579.
036. W.F. Müller, H.-R. Wenk, G. Thomas (1972). Structural variations in anorthite, *Contrib. Mineral. Petrol.*, 34, 304-314. [Download PDF](#)
035. D.W. Baker, H.-R. Wenk (1972). Preferred orientation in a low symmetry quartz mylonite, *J. Geol.*, 80, 81-105.
034. H.-R. Wenk, C.S. Venkatasubramayan, D.W. Baker, F.J. Turner (1973). Preferred orientation in experimentally deformed limestone, *Contrib. Mineral. Petrol.*, 38, 81-114. [Download PDF](#)
033. H.-R. Wenk, W.R. Wilde (1972). Orientation distribution diagrams for three Yule marble fabrics, in, *Flow and Fracture of Rocks*, Heard, Borg, Carter and Raleigh (eds.), *Geophys. Monogr.* 16, 83-94, *Am. Geophys. U.*, Washington. [Download PDF](#)
032. H.-R. Wenk, G.L. Nord (1971). Lunar bytownite from 120034-44, *Proc. Second Lunar Sci. Conf., Suppl. 2, Geochim. Cosmochim. Acta*, 1, 135-140.
031. H.-R. Wenk (1971). Variations of lattice constants in clinoamphiboles, *Zeitschr. Krist.*, 133, 341-354.
030. K.N. Raymond, H.-R. Wenk (1971). Lunar ilmenite (refinement of the crystal structure), *Contrib. Mineral. Petrol.*, 30, 135-340. [Download PDF](#)
029. H.-R. Wenk, R. Maurizio (1970). Geological observations in the Bergell area (S.E. Alps). II. Contact minerals from Mte. Sissone-Cima di Vazzeda (a mineralogical note), *Schweiz. mineral. petrog. Mitt.*, 50, 349-354.
028. H.-R. Wenk (1970). Submicroscopical twinning in lunar and experimentally deformed pyroxenes, *Contrib. Mineral. Petrol.*, 26, 315-323. [Download PDF](#)
027. H.-R. Wenk (1970). Geologische Beobachtungen im Bergell. I. Gedanken zur Geologie des Bergeller Granits. Rueckblick und Ausblick, *Schweiz. mineral. petrog. Mitt.*, 50, 321-349. [Download PDF](#)
026. D.W. Baker, H.-R. Wenk, J.M. Christie (1969). X-ray analysis of preferred orientation in fine-grained quartz aggregates, *J. Geol.*, 77, 143-172. [Download PDF](#)
025. H.-R. Wenk (1969). Polymorphism of wollastonite, *Contrib. Mineral. Petrol.*, 22, 238-247. [Download PDF](#)

024. H.-R. Wenk (1969). Annealing of oligoclase at high pressures, *Am. Mineral*, 54, 95-100.
[Download PDF](#)
023. H.-R. Wenk, E. Wenk (1969). Physical constants of Alpine rocks (density, porosity, specific heat, thermal diffusivity and conductivity), *Beitr. Geol. Schweiz; Kleinere Mitt*, 45, and *Schweiz. mineral. petrog. Mitt.*, 49, 343-357. [Download PDF](#)
022. E. Wenk, H.-R. Wenk, H. Schwander (1968). Bytownite from Cape Parry, East Greenland, *Am. Mineral.*, 53, 1759-1764. [Download PDF](#)
021. V. Trommsdorff, H.-R. Wenk (1968). Terrestrial metamorphic clinoenstatite in kinks of bronzite crystals, *Contrib. Mineral. Petrol.*, 19, 158-168. [Download PDF](#)
020. H.-R. Wenk, V. Trommsdorff, D.W. Baker (1968). Inverse pole-figures of two carbonate fabrics, *Schweiz. mineral. petrog. Mitt.*, 48, 467-470.
019. H.-R. Wenk, Y. Kolodny (1968). Preferred orientation of quartz in a chert breccia, *Proc. Nat. Acad. Sci.*, 59, 1061-1066.
018. H.-R. Wenk, D.W. Baker, E.T. Griggs (1967). X-ray fabric analysis of hot-worked and annealed flint, *Science*, 157, 1447-1449. [Download PDF](#)
017. H.-R. Wenk (1967). Die Ermittlung der Typenwerte, 145-176, in *Die optische Orientierung der Plagioklase*, C. Burri, R.L. Parker and E. Wenk, Teile: Über die Mittelwertbildung und die elektronische Berechnung der Typenwerte, Numerische Daten, Basel, Birkhaeuser.
016. H.-R. Wenk (1967). Die Triklinität der Alkalifeldspäte in Lepontinischen Gneissen, *Schweiz. mineral. petrog. Mitt.* 47, 129-143.
015. H.-R. Wenk (1967). Baryt und Ankerit aus Ammoniten des Berner Juras (Schweiz), *Contrib. Mineral Petrol.*, 14, 81-85. [Download PDF](#)
014. E. Wenk, H.-R. Wenk, H. Schwander (1966). Monokliner Kalifeldspat aus Silikatmarmor von Cevo (Val Masino) und anderen Fundpunkten der suedlichen Zentralalpen, *Schweiz. mineral. petrog. Mitt.*, 46, 413-420.
013. H.-R. Wenk (1966). Die geologische Abbildung, erlaeutert am Beispiel der Zentralalpen, *Eclogae Geol. Helv.*, 59, 777-788.
012. H.-R. Wenk (1966). New X-ray data for wenkite, *Schweiz. mineral. petrog. Mitt.*, 46, 85- 88.
011. H.-R. Wenk (1966). Bausteine der Stadt Basel (Erläuterungen zum Wandmosaik in der Ausstellungshalle des Bernoullianums), *Regio Basiliensis*, 7, 13-32.
010. H.-R. Wenk (1966). Labradorite from Surtsey (Iceland), *Schweiz. mineral. petrog. Mitt.*, 46, 81-84. [Download PDF](#)
009. H.-R. Wenk (1966). Fehlbau in Quarzkristallen aus Tektoniten, *Contrib. Mineral. Petrol.*, 12, 63-72. [Download PDF](#)
008. E. Wenk, H. Schwander, H.-R. Wenk (1965). Labradorit aus Surtsey, *Acta naturalia islandica*, 2/5, 1-29.
007. H.-R. Wenk (1965). Die geologische Abbildung, *Verh. Schweiz. Natf. Ges.*, 98-101.
006. H.-R. Wenk (1965). Gefügestudie an Quarzknuern und linsen der Tessiner Kulmination, *Schweiz. mineral. petrog. Mitt.*, 45, 468-516. [Download PDF](#)

005. H.-R. Wenk (1965). Eine photographische Röntgengefügeanalyse, Schweiz. mineral. petrog. Mitt., 45, 518-550. [Download PDF](#)
004. V. Trommsdorff, H.-R. Wenk (1965). Die Regelung des Dolomites von Crevola (Simplon), Diskussion und Probleme, Schweiz. mineral. petrog. Mitt., 45, 551-569. [Download PDF](#)
003. H.-R. Wenk, V. Trommsdorff (1965). Koordinatentransformation, indirekte Orientierung, Nachbarwinkelstatistik. Gefügekundliche Rechenprogramme mit Beispielen. Beitr. Mineral. Petrog., 11, 559-585. [Download PDF](#)
002. H.-R. Wenk (1964). Wärmeleitungs-messungen an Schweizer Gesteinen, Schweiz. mineral. petrog. Mitt., 44, 89-104. [Download PDF](#)
001. H.-R. Wenk (1963). Eine Gefüge-Röntgenkamera, Schweiz. mineral. petrog. Mitt., 43, 707-719. [Download PDF](#)