

Curriculum Vitae HANS-RUDOLF WENK

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, 1990 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
- 1999 Senior Research Fellow, Japanese Soc. Promotion of Science, University of Hiroshima
- 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. Igegneria 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. Igegneria 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
- Wason 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.

RECENT PH.D. STUDENTS

- B. Erskine (1986)
- D. Ague (1987)
- T. Takeshita (1987)
- L. Goodwin (1988)
- W. Hirt (1991)
- F. Heidelbach (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)

CURRENT GRADUATE STUDENTS

Panod Viseshchitra

Chase Chandler

Michelle Devoe

VISITING SCIENTISTS

Jingyi Huang (Beijing)

MAIN RESEARCH SUPPORT

NSF: Anisotropy Changes during Deformation and Phase Transformations. #EAR1343908

NSF: The origin of anisotropy in the lowermost mantle (with B. Romanowicz).

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

Books

- 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. Tome 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. Tome 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 Mikroskopija 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

477. Huang, J., Devoe, M., Gomez-Barreiro J., Ren, Y., Vasin, R., Wenk, H.-R. (2021). Preferred orientation and anisotropy of slates from Northern Spain. *Int. J. Earth Sci.* (submitted).
476. 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.* (submitted)
475. Chandler C.B., Kunz M., Devoe, M., Wenk H.-R. (2021) Using multigrain crystallography to explore the microstructural evolution of the α -olivine to γ -ringwoodite and ϵ -spinel transformation at high pressure and temperature. *Minerals* (submitted)
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. [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. (2020) 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 [https://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]
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 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., Cottaar, 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 + ferropericlaase 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 \square -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]
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]
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., Guttman, 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, 5144-5151 [doi:10.1016/j.actamat.2013.04.068]
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.
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