

Meet the Authors



Håkon Austrheim is a professor of metamorphic petrology at the Physics of Geological Processes (PGP) center, University of Oslo. His research is field based, and his main interests are the role of fluids in metamorphism and metasomatism of the deep crust and, in particular, how fluid-driven eclogite formation influences the petrophysical properties and consequently the geodynamics of collision and subduction zones. He is currently working on CO₂ sequestration in ultramafic rocks and applies field data and principles from metamorphic petrology to environmental issues.



Wolfgang Bach completed a PhD in 1996 at the University of Gießen, Germany, where he had received his Diploma in mineralogy five years earlier. Between 1996 and 2005 he worked at the Woods Hole Oceanographic Institution on deep-sea hydrothermal processes. He is currently a professor at the University of Bremen, where he leads the "Petrology of the Ocean Crust" research group. His research interests include hydrothermal geochemistry, ocean-crust-mantle geochemical exchange budgets, fluid-rock interactions, and geomicrobiology. He has spent almost two years at sea on various drilling and diving expeditions.



James A. D. Connolly is a professor in the Earth Science Department of the Swiss Federal Institute of Technology. He was born on the muddy shores of the Gowanus Canal in Brooklyn, New York, and received a BA in geology from Colby College in 1979, an MSc in geology from Arizona State University, and a PhD in geochemistry and mineralogy from the Pennsylvania State University in 1987. His research interests include the role of two-phase flow in the expulsion of fluids from rocks and the coupling of petrologic and geo-physical processes.



Gretchen L. Früh-Green is a senior research scientist at the Institute of Geochemistry and Petrology of the ETH Zurich, where she leads the Marine Geology and Geochemistry group. She and her students are active in petrological and geochemical studies of fluid-rock(-microbe) interaction and geochemical fluxes associated with the alteration of submarine crustal and mantle

sequences in various tectonic environments as exposed in modern ocean basins and in ophiolites. Many of these studies focus on serpentinization processes and understanding the production of volatiles and hydrocarbons during hydrothermal activity at slow-spreading ridges, and they have resulted in the discovery of new hydrothermal systems on the seafloor.



Bjørn Jamtveit is a professor of petrology at the University of Oslo and director of PGP (Physics of Geological Processes), a Norwegian Center of Excellence at the University of Oslo. He received his PhD in Oslo in 1990 and spent the next two years as a postdoc at the University of Bristol. Bjørn's main research interests are in the general area of fluid-rock interaction, and in particular in the behavior of such systems in far-from-equilibrium situations. His research includes studies of fluid flow during metamorphism, oscillatory mineral growth in hydrothermal environments, the coupling of metamorphic reactions to fluid migration and fracturing, and pattern formation during travertine growth. In the cross-disciplinary PGP center, these and other problems are addressed by a combination of field studies, computer simulations, and physical experiments.



Timm John is a metamorphic petrologist-geochemist at the Institut für Mineralogie at the University of Münster, Germany. He received a Diplom in geology from Bremen University and a doctoral degree in mineralogy from Kiel University, both on topics related to metamorphic petrology. His current research centers on the processes and mechanisms occurring during fluid-rock interaction, with emphasis on crystalline, low-permeability rocks and subduction zone processes.



Andrew Putnis is a professor of mineralogy at the University of Münster, Germany. He has broad interests in the evolution of microstructures in minerals as a result of reequilibration mechanisms associated with changes in physical and chemical conditions. His current work is on the role of aqueous fluids in such processes and involves a spectrum of analytical techniques to study fluid-mineral interactions. He studied physics at the University of Newcastle, Australia, and geology at Birkbeck College, London, UK, before completing a PhD at the University of Cambridge.



Henrik Svensen is a senior researcher in geology at the University of Oslo (Physics of Geological Processes), where he received an MSc on contact metamorphism in 1996 and a PhD on the geochemistry of metamorphic fluids in 2000. The last ten years of his research have been devoted to fluid flow and to fluid expulsion in sedimentary basins affected by igneous intrusions. Contact metamorphism, fluid generation, and fluid venting are among his central research topics, with key field areas located in South Africa and Siberia, supplemented by borehole and seismic studies in offshore Norway. He was awarded the status of Young Outstanding Scientist by the Norwegian Research Council in 2007, as a result of a project devoted to the connections linking large igneous provinces, volcanic basins, and environmental crises.

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