

Meet the Authors



Michael Brown held academic appointments in the UK until 1990 when he moved to the University of Maryland as Professor of Geology and Chair. His research interests are in high-temperature metamorphic petrology, crustal melting, and tectonic geology. His work on migmatites and associated granites has furthered our understanding of how heat and mass are transferred within continents, and in particular the relationships between sources and sinks of melt and the importance of melt in the tectonic evolution of orogenic belts. With time his research has broadened into ultrahigh-temperature and high-pressure metamorphism, the origin of paired metamorphic belts, and secular change.



Bernardo Cesare is a professor of petrology at the University of Padova (Italy), where he earned a PhD in geology in 1992 studying the Vedrette di Ries contact aureole. His research interests include low-pressure metamorphism and anatexis of pelitic rocks, fluid–melt–rock interactions in graphitic systems, fluid and melt inclusions, and the crystal chemistry of high-temperature minerals. His approach to crustal melting involves primarily the multidisciplinary study of anatectic enclaves from SE Spain and of “nanogranite” inclusions in migmatites and granulites. During the last decade he was deeply involved in coordinating the international training of early-stage researchers in metamorphic petrology.



Chris Clark is a senior research fellow in metamorphic geology and geochronology at Curtin University in Western Australia. His principal research interests are in the linking of geochronology, specifically the U–Pb method using zircon and monazite, with the development of metamorphic assemblages in order to constrain the durations of mountain-building events in high-grade metamorphic terranes.



Ian C. W. Fitzsimons is a professor of metamorphic geology at Curtin University in Perth, Western Australia. After an undergraduate degree at the University of Cambridge, he completed a PhD on granulite facies metamorphism at the University of Edinburgh, followed by research positions at Royal Holloway University of London, the University of Edinburgh, and Monash University. He moved to Perth in 1998, where he focuses his research on the field geology, mineralogy, petrology, and geochronology of metamorphic rocks, particularly the Precambrian granulites of Antarctica, India, and Madagascar.



Simon L. Harley is Professor of Lower Crustal Processes at the University of Edinburgh, Scotland. He has over 30 years experience in metamorphic and experimental geology and geochemistry, which he has applied to understanding the high-temperature processes that take place during the evolution of continents. His approach emphasizes their chemical, isotopic, and petrographic records as preserved in minerals and mineral assemblages. He is internationally recognized as a leading authority on ultrahigh-temperature metamorphism and granulites and their implications for continental evolution.



Nigel B. W. Harris, a graduate of the University of Cambridge, is a petrologist and geochemist who has studied the causes and consequences of melt production in tectonically thickened crust since his first Tibetan field campaign in 1985. He was appointed Professor of Tectonics at the Open University (UK) in 2001. In recent years his work has focused on chemical proxies for global weathering fluxes and the linkage between tectonics, orography, and climate in the Himalaya.



David Healy is Lecturer in Geomechanics at the University of Aberdeen. He has research interests in structural geology, rock mechanics, tectonics, and metamorphic geology. He has a keen interest in the theory of natural rock deformation and uses quantitative models to explore the consequences of theoretical predictions in terms of field and laboratory observations.



Marian B. Holness studied for both her degrees at the University of Cambridge. After periods at the University of Chicago and the University of Edinburgh, she returned to Cambridge in 1997 to take up a teaching post. Her interests are primarily in decoding the record of rock history left behind in grain-scale fabrics. She has progressed from working on volatile fluids in metamorphic rocks, through the partial melting of high-grade metamorphic rocks, and is now investigating the complex problem of solidification, in particular of gabbros.



Rebecca A. Jamieson is a graduate of Memorial University of Newfoundland (PhD 1979) and is currently Carnegie Professor and Chair of Earth Sciences at Dalhousie University in Halifax, Canada. She studies interactions between metamorphic and tectonic processes at all scales using a variety of approaches, including field work, petrology, geochronology, and geodynamic modeling. She has worked on parts of the Appalachian–Caledonian, Grenvillian, and Himalayan–Tibetan orogenic belts. Her recent work has focused on the causes and consequences of melting and ductile flow in orogens and on the exhumation of ultrahigh-pressure metamorphic rocks.



Timothy E. Johnson is a postdoctoral research scientist at the University of Mainz. He received his BSc (1992) and PhD (1999) from the University of Derby and held postdoctoral positions at the universities of Graz and Maryland before moving to Germany. His expertise is in metamorphic geology and mineral equilibria modeling of subsolidus and suprasolidus rocks of varying compositions and from a variety of tectonothermal environments. He has a particular interest in the generation and segregation of melt and its consequences for the compositional, thermal, and rheological evolution of the crust.

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Fawna J. Korhonen is a research fellow at Curtin University of Technology, Australia. She moved to this position in 2009 after a three-year postdoctoral appointment at the University of Maryland. Fawna received her BA from Carleton College and her PhD from the University of Minnesota. Her research interests include the study of polyphase high-grade metamorphism and anatexis, and the processes of mass transfer within the crust that lead to intracrustal differentiation during orogenesis. She is particularly interested in the chemical and physical effects of melting and melt loss during protracted crustal evolution, and the genetic link between residual granulites, migmatites, and granites.



Claudio L. Rosenberg graduated from the State University of Milano (Italy) in 1989, where he completed an MSc thesis on the growth of K-feldspar megacrysts in granites. After a PhD in Basel (Switzerland) on the emplacement and solid-state flow of the Bergell pluton (Central Alps), he moved to Giessen (Germany) where he studied the fabrics of synkinematic, partially melted rock using experimental analogues. Based on these experiments and studies of natural migmatitic fabrics, he described the modes of localization and melt segregation and the rheological changes during deformation of melting crust. He is now at the Freie Universität Berlin (Germany), where he works on the syncollisional exhumation of the Alpine chain.



Edward W. Sawyer received his first degree from the University of Southampton. He then worked for the Geological Survey of South Africa in Namibia for six years and obtained a master's degree from the University of Cape Town. He then moved to Canada and received a PhD from the University of Toronto, followed by postdoctoral research at the Geological Survey of Norway. He returned to Canada in 1986 to take a post at the Université du Québec à Chicoutimi, where he is now a professor. His principal research interest is in migmatites and the segregation and migration of anatectic melt in the continental crust.



Karel Schulmann started his career in 1987 at the Czech Geological Survey in Prague. From 1991 to 2004 he was chair of the Department of Structural Geology and Petrology of Charles University in Prague. Since 2004 he has held the position of professor of geology and tectonics at the University of Strasbourg. His research interests include the structural geology and tectonics of orogenic collisional systems, metamorphic petrology, metamorphic microstructures and textures, rock fabrics, orogenic processes such as the exhumation of orogenic lower crust, the mechanisms of lower crustal flow, and the accretion of juvenile crust in the Central Asian Orogenic Belt.



Christine S. Siddoway received her BA from Carleton College and MSc from the University of Arizona. Following her PhD from the University of California, Santa Barbara, she completed a Fulbright postdoctoral research fellowship at the University of Siena (Italy). She has been an investigator in the U.S. Antarctic research program since 1990, during which time she has examined the history of breakup between West Antarctica and New Zealand, the evolution of the active margin of East Gondwana, and the deformation and metamorphism of mid-crustal rocks in transcurrent settings. She is on the faculty of the Geology Department at Colorado College and served as chair during 2007–2010.



Gary Stevens graduated with BSc and MSc degrees from Rand Afrikaans University in Johannesburg and received his PhD degree from the University of Manchester in 1995. Following this, he spent 5 years at the University of the Witwatersrand, where the Economic Geology Research Unit kindly indulged his research interests in petrology. For the past 10 years he has been employed at Stellenbosch University, where he holds the position of South African Research Chair in Experimental Petrology. His main research interests are the origins of the continental crust, partial melting of the crust, and the processes that shape granite chemistry.



Martyn J. Unsworth has been a professor of geophysics at the University of Alberta in Edmonton, Canada, since 2000. He holds a BA in natural sciences (1986) and a PhD in marine geophysics (1991), both from the University of Cambridge. His research focuses on the use of electromagnetic geophysics to study continental dynamics. His recent studies have been in the Tibetan Plateau, eastern Anatolia, Taiwan, and the Canadian Cordillera. He makes use of the magnetotelluric method to study the composition of the crust and mantle in regions undergoing deformation. He has also worked on the use of these geophysical techniques in environmental and geothermal applications.



Richard W. White is a professor of metamorphic geology at the University of Mainz, Germany. He received his BSc and MSc from the University of Sydney and his PhD from Macquarie University (Sydney) in 1998. He spent nine years at the University of Melbourne in several postdoctoral positions, undertaking mineral equilibria modeling studies, focusing on partial melting. He then moved to Germany, where his main interests center on high-temperature metamorphic processes, the development of mineral and melt activity-composition models, and their application to natural examples. He is currently an editor of the *Journal of Metamorphic Geology*.

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