Subduction zone magmatism: from slab to ores

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Subduction zone volcanoes are known for their potential to wreak hazard, through catastrophic eruptions and climate-changing gas emissions. However, volcanoes also furnish humankind with considerable bounty, in the form of fertile volcanic soils and metal ore deposits. In this lecture Professor Blundy will explore magmatism at subduction zones from the subducted slab, through mantle wedge and crust to the volcanic edifice. The talk will draw on examples from some of the world’s most hazardous volcanic arcs, including the Andes, Lesser Antilles, Cascades and Kamchatka.

Jon Blundy is an igneous petrologist, with interest in all things magmatic, from magma generation in the crust and mantle to trace element geochemistry, active volcanism and ore formation. He approaches these topics through a combination of field observations, thermodynamics, geochemical analysis, and high pressure and temperature experiments. He is Professor of Petrology at the University of Bristol, where he has been since 1989.