

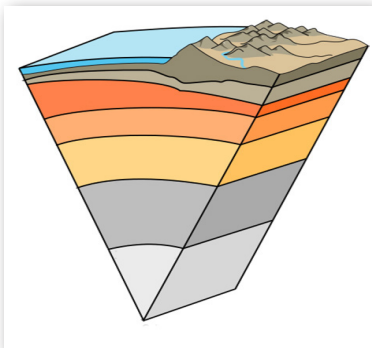
# Geowissenschaftliches Kolloquium

## *From the mineral scale to the continental scale: A geochemical perspective on the evolution of the continental crust*

Donnerstag, 15. Januar 2014 - 16.15 Uhr

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(University of Bristol)

The timing, rates and the geodynamical conditions of continental crust generation remain a topic of considerable debate. Continental growth models rely on understanding the balance between the generation of new crust and the reworking of old crust, and how these have changed throughout Earth's history. For that purpose, the variations in radiogenic isotope ratios in detrital rocks and minerals are a key archive. Two different approaches are considered to model the growth of continents: (1) the variation of Nd isotopes in continental shales; and (2) the variations in U-Pb, Hf and O isotopes in detrital zircons. Both approaches independently suggest that the continental crust was generated continuously, and a marked decrease in the continental growth rate at ca. 3 Ga may be linked to onset of subduction-driven plate tectonics.



I was born in Chamonix in the French Alps. I pursued my studies, including my doctoral thesis, in the south of France at the Montpellier 2 University. I have been based at the University of Bristol since 2007, when I began working as a post-doctoral research fellow on the evolution of the continental crust. I became a NERC Research Fellow in 2013, and my current research is to unravel the timing for the global onset of plate tectonics, using a combination of 'well-known' (e.g. Sr and Pb isotopes) and 'new' (e.g. Ca isotopes) geochemical tools.



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