



**Tracey Crossingham** graduated with a BSc in Geological Sciences from the University of Queensland (UQ) (Australia) in 2011, and began researching Cenozoic volcanism in Eastern Australia as an honors student in 2012. Following graduation, she continued to pursue a keen interest in eastern Australian volcanism as a PhD student within the School of Earth Sciences at UQ. Her work focuses on understanding the depth of origin of two seismically shallow hotspot tracks in eastern Australia: the central volcanoes and the Tasmanid Seamounts. Volcanic samples were collected through terrestrial fieldwork and participation in a research cruise aboard the Marine National Facility Research Vessel, *RV Southern Surveyor*. Tracey will use helium isotopes to identify the depth of origin of these two hotspot tracks. Helium isotopes will be complemented by  $^{40}\text{Ar}/^{39}\text{Ar}$  geochronology, major and trace element geochemistry, and radiogenic isotopes to further evaluate the timing of magma emplacement, any different mantle source components, and the interaction between the upwelling magma and the lithosphere.



Tracey Crossingham, University of Queensland, Australia – "Hotspot Volcanism Down Under: A Product of Mantle Plumes or the Unique Structure and Motion of the Australian Plate?"



Ana Martínez Fernández, University of California Santa Cruz, United States – "Effects of Ocean Acidification on Benthic Foraminifera and Corals"

**Ana Martínez Fernández** earned a BSc in Environmental Sciences from the Universidad Autónoma de Madrid (Spain) in 2009. She spent a year at Umeå Universitet and at the Climate Impact Research Centre of Abisko, both in Sweden, where she became involved in several research projects related to plankton, pollution and climate change. She is currently a PhD student in the Department of Earth and Planetary Science at the University of California, Santa Cruz (California, USA). Ana is using a multidisciplinary approach to investigate the effects of ocean acidification on Caribbean corals and benthic foraminifera. She is using  $\delta^{15}\text{N}$  and  $\delta^{13}\text{C}$  as paleoceanographic proxies to study the

impacts of nutrients input through submarine groundwater discharge on calcification of corals living in a natural, low-aragonite saturation environment. She is also studying coral gene expression to assess the potential for adaptation and acclimation to ocean acidification.

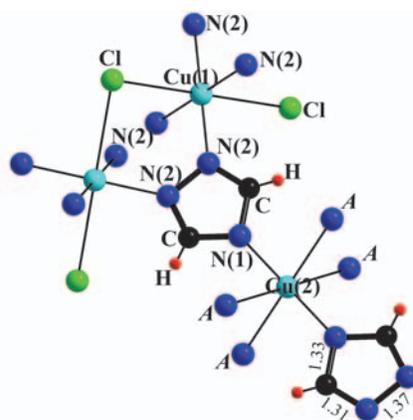
**Ibiyemi Ogunbuyi** obtained her BSc (Hons) in Geology from the University of Ilorin (Nigeria) in 2005 and her MSc in Geochemistry/Mineral Exploration at the University of Ibadan (Nigeria) in 2010. Her research focuses on carbonatites from the Eocene Dicker Willem Complex (SW Namibia) and their associated silicate rocks. Her work focuses on unravelling the timing and sources of REE enrichment using Lu/Hf, Rb/Sr, Nd/Sm, and U/Pb radiogenic isotopes, and also determining rare earth minerals of economic importance by X-ray diffraction and by electron microprobe analysis. Her work will also generate high-quality inductively coupled plasma mass spectrometry trace element data that will further improve our understanding of the petrogenesis of carbonatites in the study area.



Ibiyemi Ogunbuyi, University of Cape Town, South Africa – "The Geochemistry and Source Region of Carbonatites and Associated Alkaline Rocks in Zandkopsdift Namaqualand, South Africa and Southern Namibia."

## MINERAL OF THE YEAR 2015

The International Mineralogical Association (IMA) is pleased to announce that the Mineral of the Year award for 2015 goes to **chanabayaite**. This mineral was discovered and studied by Nikita V. Chukanov of the Russian Academy of Sciences (Chernogolovka, Moscow Region) in collaboration with Natalia V. Zubkova (Moscow State University, MSU), Gerhard Möhn (Niedernhausen, Germany), Igor V. Pekov (MSU), Dmitry Yu. Pushcharovsky (MSU), and Aleksandr E. Zadov (NPP Teplokhim, Moscow). Chanabayaite,  $\text{Cu}_2(\text{N}_3\text{C}_2\text{H}_2)\text{Cl}(\text{NH}_3, \text{Cl}, \text{H}_2\text{O}, \square)_4$ , is a new mineral species from Mt. Pabellón de Pica near the village of Chanabaya in the Tarapacá region of Chile (Chukanov et al. 2015). This unusual organometallic mineral does not only have a unique crystal structure that features the 1,2,4-triazolate anion ( $\text{N}_3\text{C}_2\text{H}_2^-$ ) (see at **LEFT**),



but also acts as a "bridge" between the geosphere and the biosphere because its deep-blue crystals formed where guano deposits (the source of the C and N) came into contact with a chalcopyrite-bearing gabbro (which supplied the Cu). Chanabayaite formed by Na and Cl leaching from, and by the dehydration of, another triazolate-bearing natural compound – and potentially another new mineral (**BELOW**) –

$\text{NaCu}_2\text{Cl}_3[\text{N}_3\text{C}_2\text{H}_2]_2[\text{NH}_3]_2 \cdot 4\text{H}_2\text{O}$  (Zubkova et al. 2016). Prof. Chukanov is known internationally both for his fascinating mineral discoveries (chanabayaite is but one of the 190 new species under Chukanov's belt) and his prominent contributions to mineral spectroscopy [most recently, Chukanov (2014) and Chukanov and Chervonnyi (2016)]. A close runner-up to the winner was decagonite ( $\text{Al}_{71}\text{Ni}_{24}\text{Fe}_5$ ), the second naturally occurring quasicrystal from the Khatyrka CV3 carbonaceous chondrite (Bindi et al. 2015).



Sergey Krivovichev, IMA President

## REFERENCES

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