



Distinctive Chemical Features, Exploration Guides and Petrogenesis of Copper and Gold Ore-Forming Arc Magmas

Course content: See attached pictorial abstract (PDF) for an overview of the course content, including distinctive lithophile-element compositions of copper- and gold-ore-forming arc magmas (which permit screening of whole-rock geochemical databases to identify Cu- and Au-fertile igneous complexes), and including distinctive chemical features of zircon from Cu-ore-forming intrusions, applicable to detrital zircons for identification of exploration targets. Cu- and Au-ore-forming igneous complexes form in specialized tectonic stress regimes that are distinctive for the duration of the metallogenic epoch and extent of the metallogenic province. Their recognition assists selection of exploration targets.

About the speaker: A/ Prof Robert Loucks (PhD Harvard University) has been with the CET since 2009. He is a globally recognized expert in igneous petrology/geochemistry and metallogeny at convergent plate margins.

Date and Time: 17th April 2024 (Wednesday), 08:30 to 17:00 (Perth time - GMT+8)

Location: The University Club of Western Australia, Entrance 1, Hackett Drive

Cost: CET Members AU\$300 +GST | CET Non-Members AU\$400 + GST | Postdoctoral Fellows AU\$100 + GST | Students AU\$50 +GST

Registration: For registration and payment information please visit our website: www.cet.edu.au and for more information please email us at info.cet@uwa.edu.au

TIME	TOPIC
08:30-09:00	Registration and coffee
09:00-10:30	Whole-rock chemical discriminants, specialized tectonic habitats, and petrogenesis of copper -ore-forming arc magmas, with applications to exploration targeting
10:30-10:55	COFFEE BREAK
10:55-12:40	Continuation of whole-rock chemical discriminants, specialized tectonic habitats, and petrogenesis of copper-ore-forming arc magmas, with applications to exploration targeting
12:40-13:40	LUNCH BREAK
13:40-14:40	Zircon trace-element indicators of magmatic fertility for copper (and gold) metallogeny, applicable to detrital zircons for exploration targeting
14:40-15:00	COFFEE BREAK
15:00-16:45	Whole-rock chemical discriminants, specialized tectonic habitats, and petrogenesis of gold -ore-forming arc magmas, with applications to exploration targeting
16:45-17:00	Wind-Up
17:00 onwards	SUNDOWNER