

The Franco Pirajno Symposium: REE and Nb - from metasomatised mantle to economic concentrations in the upper crust

Course Content: This course, which recognizes the contributions of Dr. Franco Pirajno to the CET and to research on carbonatites globally, is aimed at explorers of rare earth elements, niobium, and other critical elements, as well as academics with an interest in the role of carbonatites and metasomatized mantle lithosphere in the formation of mineral deposits. The course will cover current research at the CET, focusing on the understanding of carbonatite genesis and its role as an agent for transferring mantle S into sulphide-bearing ore bodies in the crust. This workshop is also framed around the vision of the newly funded ARC Industrial Transformation Training Centre in Critical Resources for the Future and includes several prominent Australian researchers with expertise in carbonatite magma formation and processes that lead to economic concentration of REE and Nb:

- John Mavrogenes
- Ross Chandler
- Greg Yaxley
- Carl Spandler

The course is recommended for explorers engaged in the search for critical elements and researchers with an interest in carbonatites and other alkaline magmas.

Duration: 08:30 to 16:30 (Perth time - GMT+8) followed by Sundowner

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

Cost: Face to face: Non-Members AU\$600 + GST | Members AU\$400 + GST | Students AU\$100 + GST

Online: AU\$300 + GST

Registration: For registration and payment information please visit our [website](#).

7th June 2024

Centre for **EXPLORATION
TARGETING**



ARC CRITICAL RESOURCES
FOR THE FUTURE

Schedule

TIME	TOPIC	SPEAKERS
FRIDAY		
07/06/2024		
08:30-09:00	REGISTRATION	
09:00-09:15	Introduction: CET, ITTC, Workshop	Steffen Hagemann, Marco Fiorentini, Walter Witt (UWA)
09:15-10:05	REE in alkaline complexes and carbonatites	Franco Pirajno (CET)
10:05-10:50	The carbonatite-REE connection, a few examples, and some experimental insights	John Mavrogenes (ANU RSES) <i>Keynote speaker</i>
10:50-11:10	COFFEE BREAK	
11:10-11:30	An overview of Australian carbonatites in the context of REE and Nb exploration	Ross Chandler (ANU RSES)
11:30-11:50	REE-rich minerals as geochronometers and process tracers	Tony Kemp (UWA-CET)
11:50-12:10	Incipient carbonate melting drives metal and sulfur mobilization in the mantle	Isra Ezad (UWA-CET)
12:10-12:30	Carbonated magmatic sulfide systems: still or sparkling?	Maria Cherdantseva (UWA-CET)
12:30-13:30	LUNCH BREAK	
13:30-13:50	Geological significance of Mt Weld REE deposit	Ganesh Bhat (Lynas)
13:50-14:10	Trace-element and isotope composition of calcite, apatite, and zircon associated with magmatic sulfide globules in carbonatites	Marco Fiorentini (UWA-CET-ITTC)
14:10-14:30	The formation and evolution of carbonatites in the mantle-crust system	Greg Yaxley (ANU)
14:30-14:50	Discovery of the Gifford Creek Carbonatite Plug	Luke Blais (Dreadnought)
14:50-15:10	COFFEE BREAK	
15:10-15:30	The Twihinate carbonatite complex and an emerging REE province in southern Morocco	Lucas Tatnell (UWA-CET)
15:30-15:50	Unconformity REE deposits – an unconventional REE ore style	Carl Spandler (University of Adelaide)
15:50-16:10	In the shallows: REE and their presence in the cover	Ignacio González-Álvarez (CSIRO)
16:10-16:30	Wind-Up (Closing remarks)	Steffen Hagemann, Marco Fiorentini, Walter Witt (UWA)
16:30 onwards	SUNDOWNER	