The meeting is free to attend but please register by emailing cream@contacts.bham.ac.uk to reserve your place.

This is the launch meeting for the CrEAM - Critical Elements and Materials - Network. The network has been established to provide a forum to bring together specialists from across the entire UK supply chain in critical materials to develop strategies to mitigate supply risks of critical elements and materials.

During the three years of the network we will organise a series of workshops encompassing the entire supply chain covering exploration, extraction, materials processing, applications and recovery/recycling. The network will provide a forum to bring together specialists from across the entire UK supply chain in critical materials to create a coherent ‘UK Element Strategy’ document for UK government, including policy and funding recommendations to ensure a responsible, secure and environmentally efficient supply of critical materials vital to UK industry.

The availability of secure and adequate supplies of the minerals and elements required to meet society’s growing demand for key industrial sectors such as automotive, aerospace and renewable energy technologies is of global concern. Consumption and demand for these raw materials is expected to grow in response to the expanding population. One of the greatest risks to the supply for these materials is at the extraction and processing stages. Developing novel efficient extraction techniques has the potential to reduce the environmental footprint of these processes, as well as making their production economically viable in the EU.

Using secondary materials from either end of life products or mining wastes can give significant economic and environmental benefits. For example, it is often possible to “short loop” recycle components or materials in such a way that they can be put back into the supply chain at a fraction of the cost when compared to primary production.

The first meeting will cover a broad spectrum of separation techniques from robotic, chemical, biological and short loop recycling processes for primary and secondary materials. The programme contains invited talks and a networking workshop in order to discuss the challenges for efficient separation processes, the on-going challenges for end of life recycling and foster new collaborations for future research.
Confirmed Speakers:

Reclamation and reuse of lithium ion battery materials
Dr Emma Kendrick, WMG, The University of Warwick

Processing metals and minerals using deep eutectic solvents
Professor Andrew Abbott, Department of Chemistry, University of Leicester

Biorecovery of strategic elements from wastes and upconversion into high value materials
Professor Lynne Macaskie, School of Biosciences, The University of Birmingham

Advanced robotics for handling waste materials
Professor Rustam Stolkin, School of Metallurgy and Materials, The University of Birmingham

Extraction techniques for rare earth magnets
Professor Allan Walton, School of Metallurgy and Materials, The University of Birmingham

Use of life cycle analysis for critical materials
Mr Robert Pell, Camborne School of Mines, University of Exeter

RapidSX: accelerating the extraction and separation of critical metals
Dr Gareth Hatch, Innovation Metals Corp.

Towards an integrated European rare earth supply chain
Mr Chris Hall, Less Common Metals