

Towards Sustainable Materials for Energy Applications

Call type: Expression of Interest

Closing date: 16:00 on 28 February 2019

Location: Manchester

Summary

EPSRC is holding a materials science community workshop on 26 March 2019. This will be an interdisciplinary workshop bringing together both industry and academia with the aims of promoting challenge-driven design, and to create a networking opportunity for materials scientists and industry across the materials landscape to address future challenges in energy materials. To support this, the workshop will highlight industrial energy targets within a range of energy sectors and facilitate identification of sustainable materials challenges to help promote collaborations to address these energy needs. EPSRC particularly encourages applications from researchers within the areas of Functional Ceramics and Inorganics, Graphene and Carbon Nanotechnology, Magnetic Materials, Polymer Materials and Photonic Materials. The workshop will also give attendees the opportunity to feed into EPSRC strategic development for the area.

Background

The EPSRC Materials for Energy Applications research area is defined as fundamental materials research, across all the energy sectors, into the synthesis, characterisation and theoretical understanding of functional materials to be used in energy applications. This area focusses on research into new materials related to energy applications, including alternative energy vectors, thermoelectrics, photovoltaics (PV), semiconductors, fuel cells and energy storage. Materials can include, amongst others, polymeric, complex oxide, nanoionic, caloric and porous materials for potential future energy applications. Critically, this area is focused on understanding and developing new materials for applications across the energy landscape.

Materials from Energy Applications was marked as a grow area in the EPSRC balancing capability exercise. However, excluding the strategic investments of the Faraday Institution and the Henry Royce Institute, there has only been a relatively small increase in the size of the fundamental materials research portfolio within the research area since it was assigned a grow strategy in 2016. EPSRC still believes in the importance of this area and want to continue to support the community to grow and encourage interdisciplinary networking and challenge-driven proposals. Discussions with members of the community have highlighted the need for a clearer steer from industry as to what Energy targets they require, or any sustainability issues that will impact on the currently utilized materials. This workshop aims to take steps to bring

together industry and academia to identify and address these challenges, and support the community and research area to grow so as to increase the UK's capability in the area.

For more information about EPSRC's portfolio and strategies, see our website: <https://epsrc.ukri.org/research/ourportfolio/>

How to apply

Those wishing to attend the workshop should complete the Expression of Interest (EOI). This will be used to understand the participant's research interests, and will include:

- A short statement on what you see as the key challenge in tackling sustainable energy materials;
- A short paragraph of your research interests and how your research may contribute to addressing the challenge of sustainable energy materials, or what energy sector your organisation operates in and if there are any specific research challenges you foresee (e.g. specific energy density targets, unsustainable starting materials etc.);
- A brief list of current industrial collaborators based within the energy sector.

In addition, EPSRC will also strive to ensure a balanced representation of organisation, research area, and career stage.

Places are limited and the number of participants from a given organisation may have to be restricted in the event of multiple applications. Selection will primarily be based on the justification for attendance and expertise.