

第17回研究科セミナー(物質化学フロンティア研究領域)

テーマ

Sustainable batteries and electrocatalytic processes



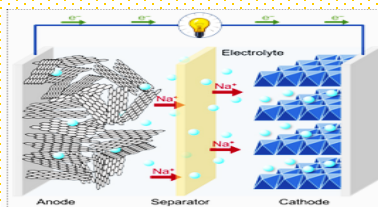
講演者: Imperial College London,
Department of Chemical Engineering
Magda Titirici



日時: 令和7年10月22日(水)11:00~12:00
場所: マテリアルサイエンス研究棟4棟8階 中セミナー室

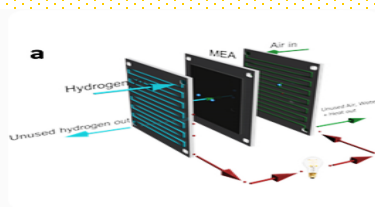
講演要旨:

To mitigate the climate change and reach a carbon neutral society before it is too late, a mix of sustainable energy technologies are needed. In this talk she will present research from her group in the area of sustainable batteries beyond Li ion, green H₂ from the electrolysis of biomass derivatives as well as fuel cells free of Pt electrocatalysts for the cathodic reaction



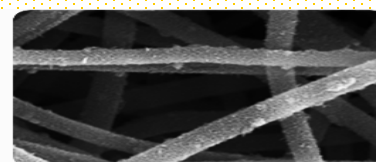
BATTERIES

Sustainable carbon materials, for application in novel battery chemistry, including Na-ion, Li-S and multi-ion batteries.



ELECTROCATALYSIS

Efficient, selective and sustainable catalysts, for fuel cells, electrolyzers, electrochemical ammonia production and CO₂ reduction.



SUPERCAPACITORS

Carbon nanofibers, with tailored porosity, functionality and electronic conductivity, for supercapacitors.

講演者略歴:

Magda has a PhD from University of Dortmund and a Habilitation from the Max-Planck Institute of Colloids and Interfaces/University of Potsdam. She moved to the UK in 2013 to take up a "Reader" position at Queen Mary University of London to be promoted to full professor one year later. Magda moved to Imperial in 2019 as a Chair in Sustainable Energy Materials. She also holds short visiting research positions in Japan, Sweden and Romania. Magda's research is on sustainable materials and their implementation in batteries beyond Li ion as well as in electrocatalytic processes including biomass oxidation and O₂/N₂/CO₂ reduction. Magda has been included on the list of highly cited researchers since 2018. Her research was awarded by Royal Society of Chemistry, Royal Society, Institute of Materials and Mines, Chinese Academy of Science and others.

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