SHORT BIO:

Dr Justyna Kulczyk-Malecka was awarded her PhD in the Surface Engineering from Manchester Metropolitan University under the supervision of Prof Peter Kelly at and industrial sponsorship of Pilkington Glass (part of NSG Group) for her research on diffusion in low emissivity coatings for large area glazing. Following that, she spent 3 years at the University of Manchester, working on self-healing thermal barrier coatings in Ceramic Coatings Group under the supervision of Prof Ping Xiao and Prof Philip J. Withers. She has an expertise in materials characterisation and production of functional films via the magnetron sputtering technique.

Currently, Dr Kulczyk-Malecka is working as a Senior Lecturer in The Department of Engineering and her cross-disciplinary research is conducted in the Surface Engineering Group and Manchester Fuel Cell Innovation Centre at Manchester Metropolitan University. Her recent work has been directed towards materials for hostile environments (corrosion, oxidation and wear resistance, diffusion barrier coating) and advanced functional layers for anode materials in solid oxide cell components for hydrogen production via hight temperature electrolysis and energy generation. Dr Kulczyk-Malecka is working closely with leading partners from the UK nuclear sectors, for whom she is developing advanced materials to serve as corrosion and diffusion barriers for new products at TRLs 1-5. She is currently working (as Co-I) on projects funded by EPSRC and Westinghouse Electric Company, Innovate UK funded Greater Manchester Electrochemical Hydrogen Cluster project and Ceimig KTP, and been recently awarded an EPSRC grant as PI on developing catalyst layers for AEM electrolysers and is a Co-I on Horizon Europe project developing sea water PEM electrolysers. She is a Fellow in Advance HE and a Member of IOM3.