

## Lichfield Science & Engineering Society



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## THE CHALLENGES OF MATERIALS AND CORROSION ENGINEERING IN NEW ENERGY TECHNOLOGY

Dr Liane Smith CBE, FREng, C.Eng, FIMMM Larkton Ltd.

8:00 pm on Wednesday 7<sup>th</sup> January 2026 In the Studio Theatre of the Lichfield Garrick

Dr Smith is a Chartered Engineer working for over 40 years in the fields of oil and gas, process engineering and wider energy technologies. After 10yrs with Shell in the UK and Netherlands she founded her own materials engineering consultancy business in 1991, sold it in 2013 and established her new consultancy, Larkton Ltd, in 2018.

Energy projects are generally large scale and high cost, hence funding and subsidies impact their feasibility. Once on the "go" path re-evaluation at project gateways has stopped numerous projects at different stages. Front end engineering design work can also identify some materials engineering challenges which affect project costing and have been important in adjusting overall design approaches and costs.

Examples will include carbon capture and sequestration project designs for the International Energy Agency from 2008, the world's first large scale offshore methane to hydrogen storage facility and optimising ambient temperature geothermal systems. When working at the forefront of engineering on new types of energy technology there are no standards to turn to; inspiration on materials selection comes from various sources.