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Fundamental questions
Elemental answers



Showcasing collaborative research from Professor Xian Du's laboratory, Mechanical & Industrial Department, University of Massachusetts Amherst, MA, USA, and Dr Ali Shehri's team, Saudi Arabian Oil Company (Saudi Aramco), Dhahran, Saudi Arabia.

Encapsulating and inkjet-printing flexible conductive patterns on a fluoroelastomer for harsh hydrocarbon fluid environments

Flexible electronics were developed for use in harsh conditions. Silver patterns were printed on a fluoroelastomer using inkjet printing and encapsulated. Conductive patterns were tested in a hydrocarbon fluid at temperatures up to 180 °C, revealing negligible changes in resistance and degradation. This study opens the way for sensor electrodes in contact with hydrocarbons in applications like automotive, oil, and gas industries.

As featured in:



See Xian Du *et al.*,
J. Mater. Chem. C, 2023, **11**, 3964.