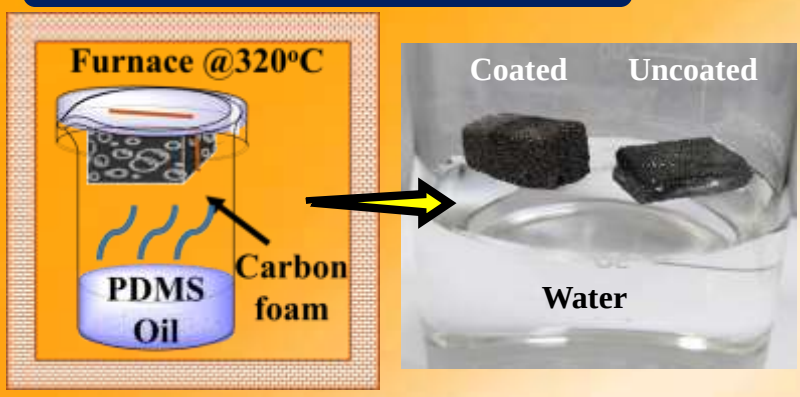
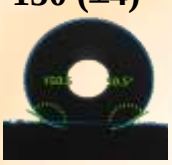
Defence Institute of Advanced Technology (Deemed to be University) Girinagar, Pune- 411025

Silicone-coating on carbon foam



Silicon oil-Coating on Carbon foam

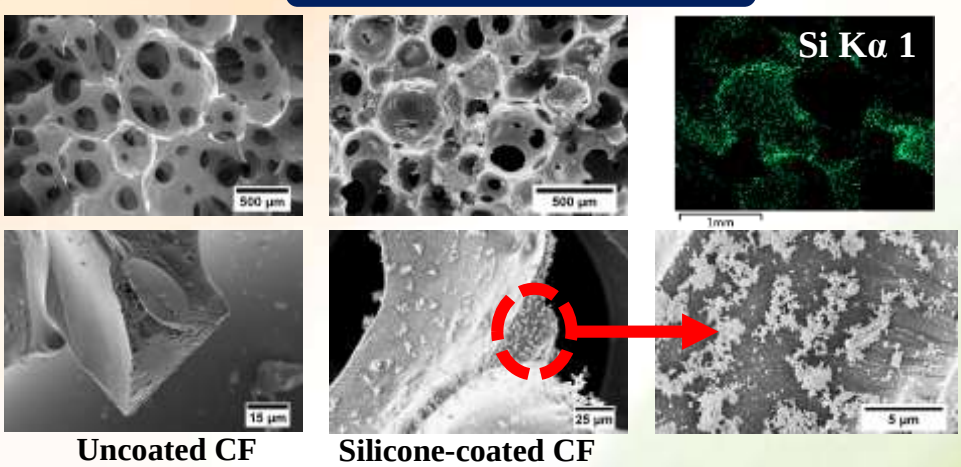
Water Contact Angle

106 (±3)°  Uncoated	167 (±5)°  Time: 14 h
150 (±4)°  Time:1 h	157 (±6)°  Time: 5 h

Investigators: Rohit Bagal and T. U. Patro (umasankarp@diat.ac.in)

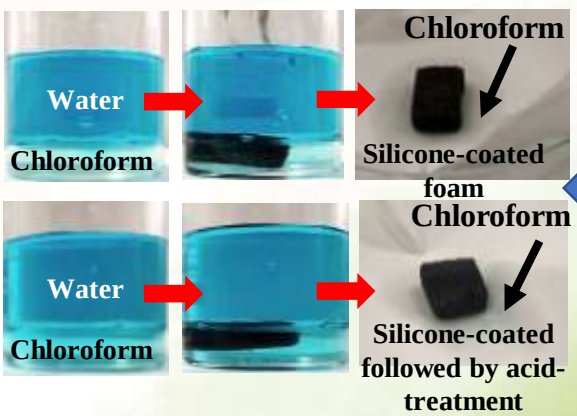
Efficient oil-water separation using superhydrophobic reticulated vitreous carbon foam

Morphology using SEM

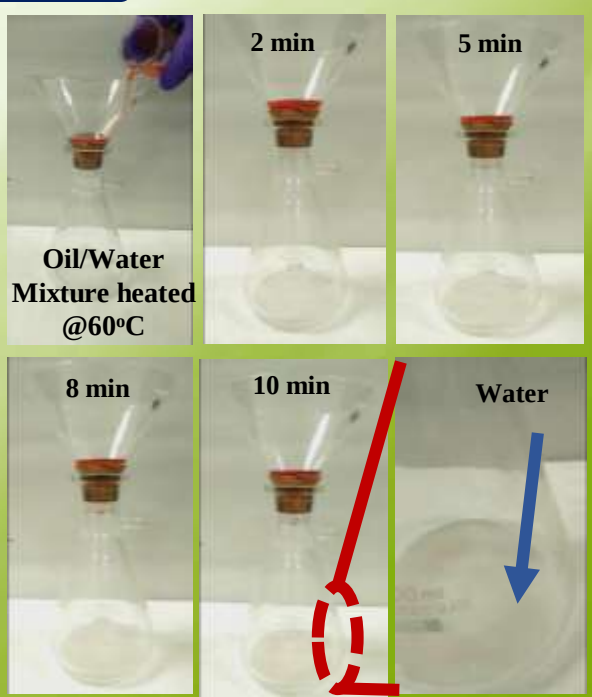


Uncoated CF | Silicone-coated CF

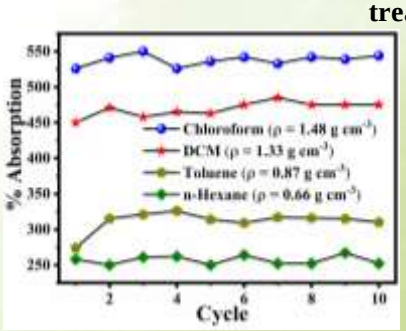
Oil-water separation



Photographs illustrating chloroform adsorption by coated CF and its acid-treated variant



Demonstration of continuous separation of engine oil by simple gravity filtration set-up from its water emulsion.



Percentage oil/solvent absorption and repeatability

Acknowledgements

- Vice Chancellor, DIAT
- Funding from DIAT (DU)
- DRDO

Outcome

- Indian Patent (Appln No: 201911028367)
- Bagal et al., *Materials Letters* (Under review) (2021)