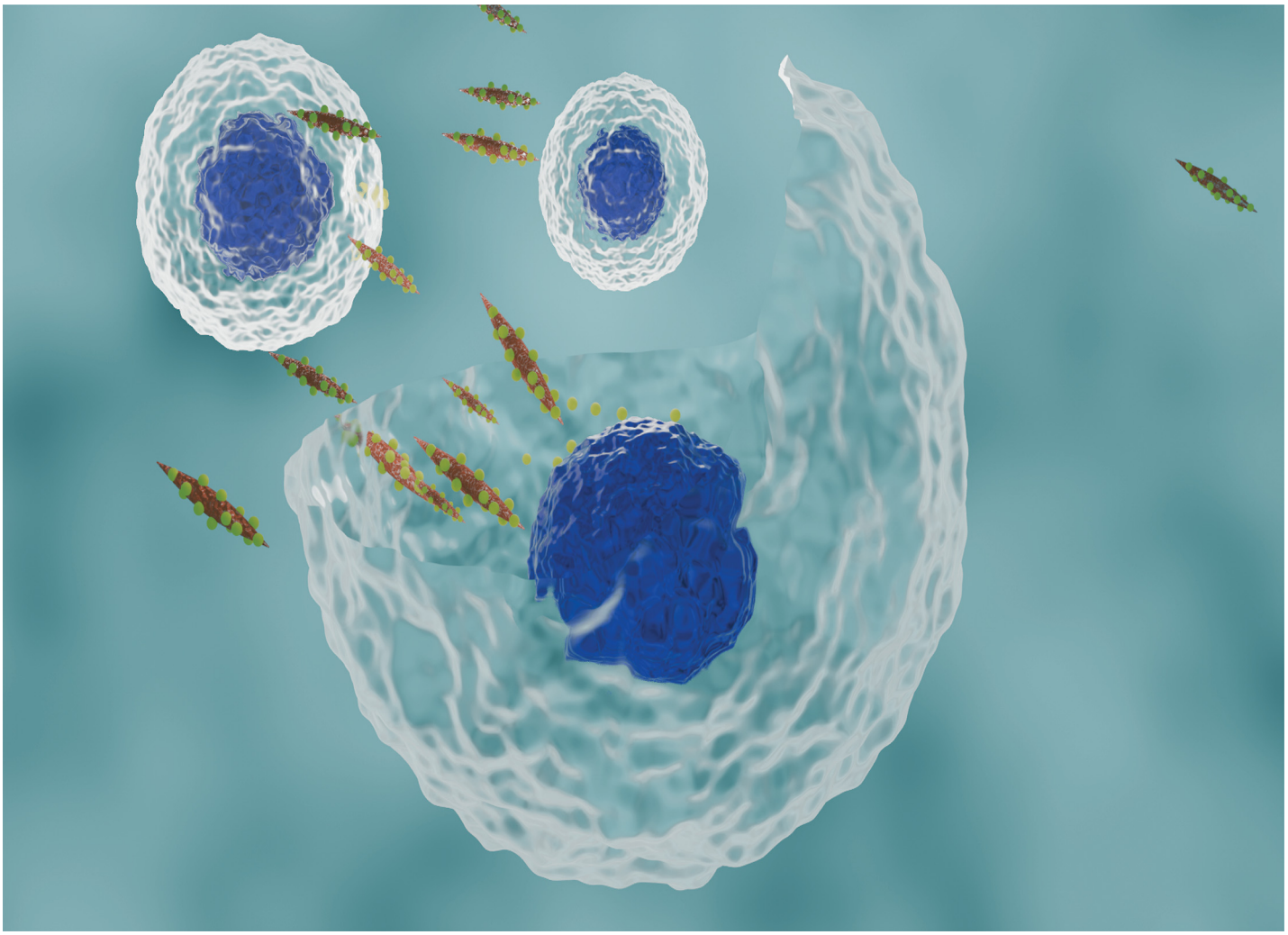

ROYAL SOCIETY
OF CHEMISTRY
Environmental Science: Atmospheres
GOLD
OPEN
ACCESS
Connecting communities and inspiring new ideas
rsc.li/submittoEA
Fundamental questions
Elemental answers
Registered charity number: 207890

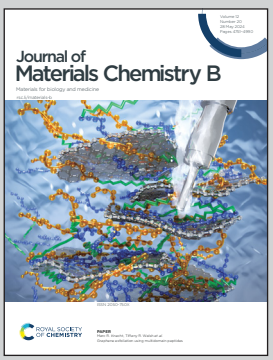


Showcasing research from Professor Swathi Sudhakar's laboratory, Department of Applied Mechanics and Biomedical Engineering, Indian Institute of Technology Madras, Chennai, Tamil Nadu, India.

Elucidating shape-mediated drug carrier mechanics of hematite nanomaterials for breast cancer therapeutics

Hematite nanoparticles (αFe_2O_3) are gaining attention for their biocompatibility, drug-loading capabilities, and cost-effectiveness compared to other metallic counterparts like gold. Despite this, there is a dearth of research exploring the impact of nanoparticle shape on drug carrier mechanisms and their efficacy in cancer therapy. Our research aims to fill this gap by investigating how the shape of hematite nanoparticles, whether elongated or spherical, influences their cellular uptake rates. Through a series of meticulously designed cellular experiments, we intend to shed light on hematite nanoparticles potential as effective drug carriers for cancer treatment.

As featured in:



See Swathi Sudhakar *et al.*, *J. Mater. Chem. B*, 2024, **12**, 4843.

ROYAL SOCIETY OF CHEMISTRY

rsc.li/materials-b

Registered charity number: 207890