

EES Catalysis

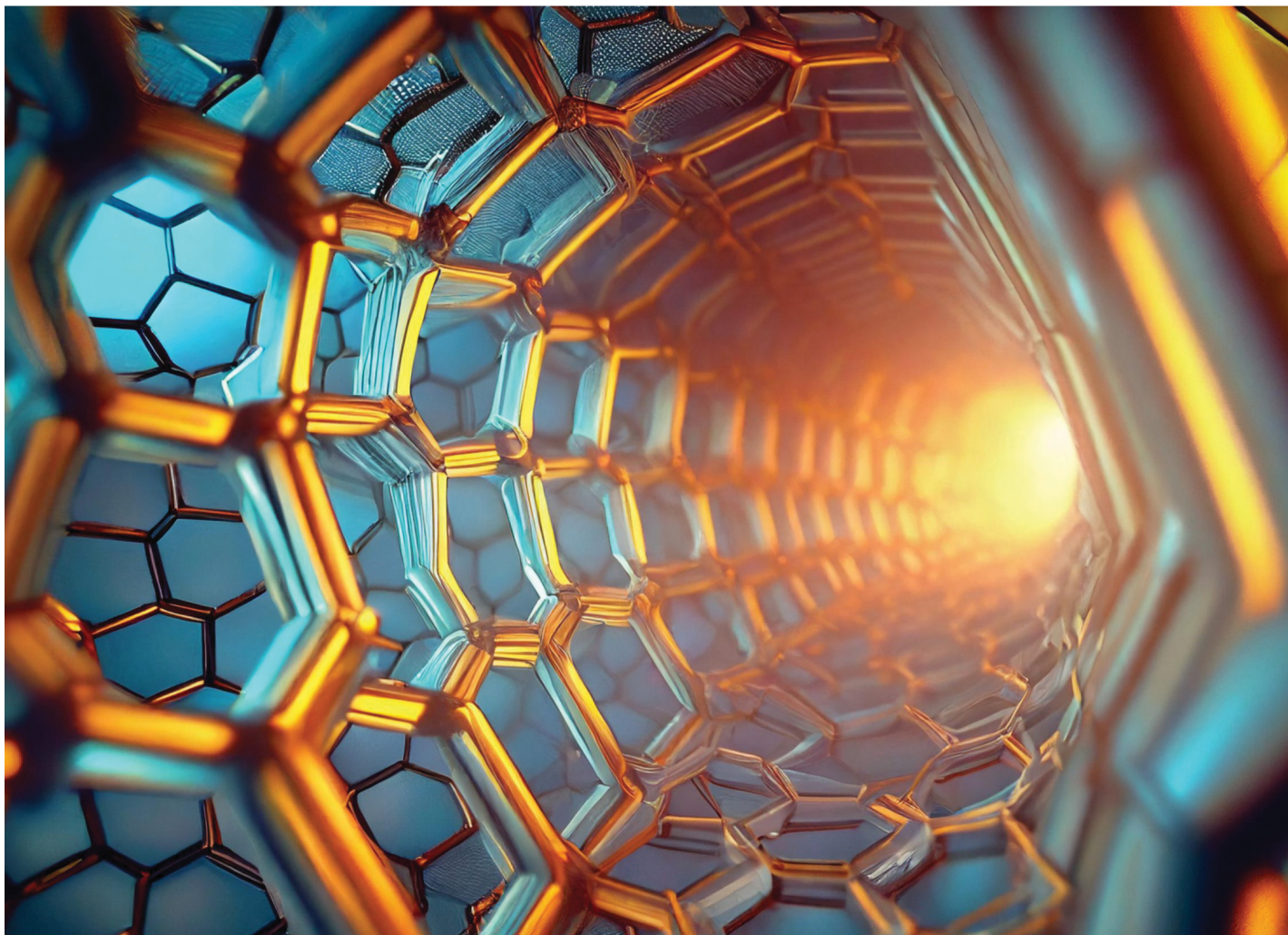
GOLD
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Exceptional research on energy
and environmental catalysis

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Fundamental questions
Elemental answers

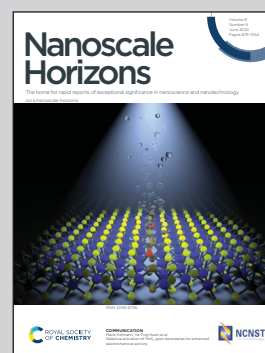


Highlighting research from Professor Shubina's team L2D,
Center for Physics of Nano-Heterostructures,
Ioffe Institute, RF

Direct observation of split-mode exciton-polaritons in a
single MoS₂ nanotube

We report an efficient optical-mechanical method to achieve strong light-matter coupling in transition metal dichalcogenide nanotubes. The tubes grown at the Josef Stefan Institute have strong exciton resonances and support whispering gallery modes that can split into two, odd and even, rapidly shifting in opposite directions along the energy scale as the tube cross-section flattens. When a split mode reaches exciton resonance, an exciton-polariton with large Rabi splitting is formed.

As featured in:



See T. V. Shubina *et al.*,
Nanoscale Horiz., 2024, **9**, 968.