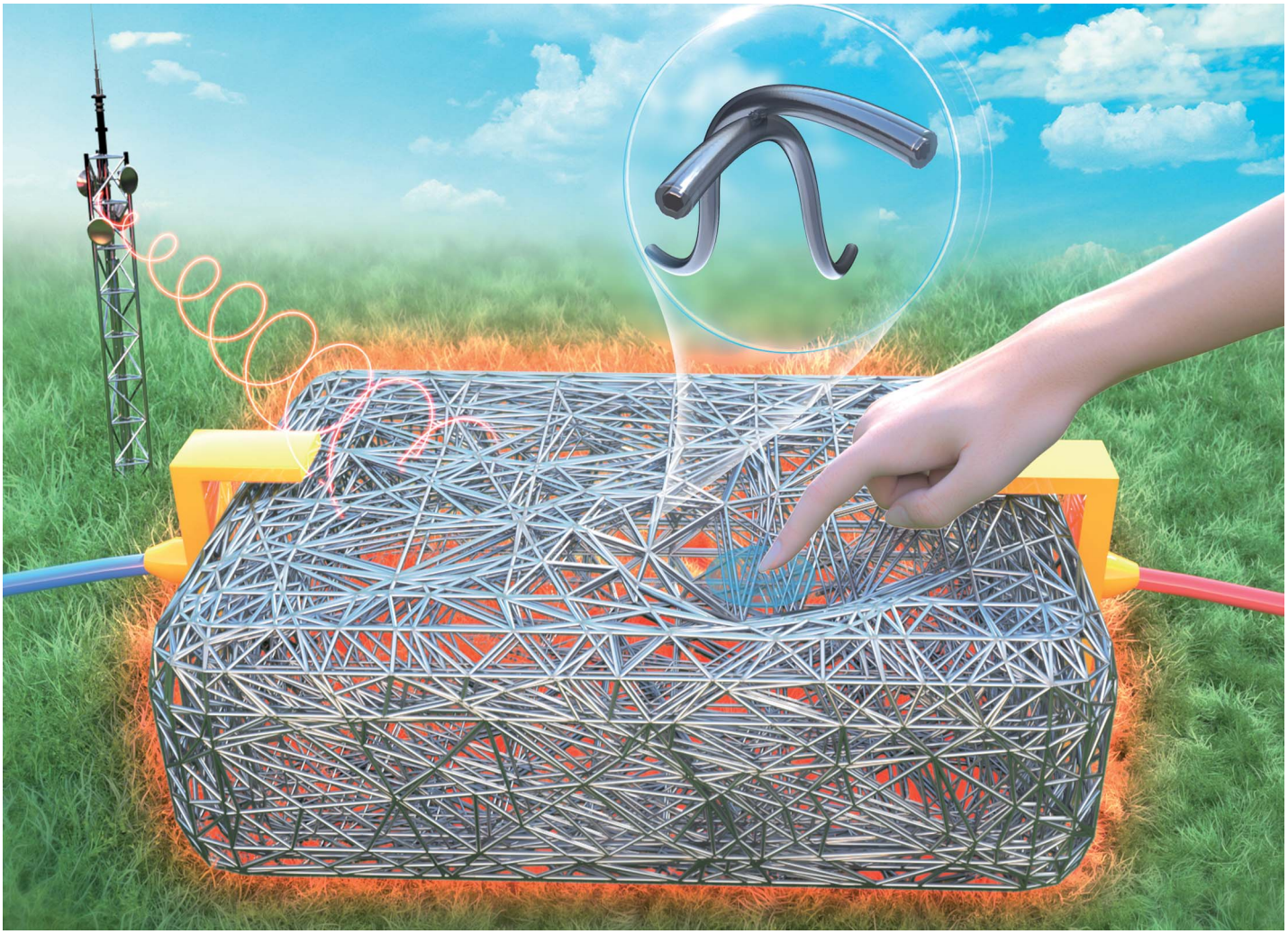

Showcasing research from Professor Mingyu Li's laboratory, School of Materials Science and Engineering, Harbin Institute of Technology (Shenzhen), Shenzhen, China.

Superelastic, highly conductive, and superhydrophobic silver nanowires@polypyrrole hybrid aerogels with outstanding electromagnetic interference shielding and Joule heating performance

Multifunctional silver nanowire-polypyrrole core-shell hybrid aerogels with highly efficient EMI shielding and Joule heating are demonstrated. PPy weld adjacent AgNWs, enhancing elasticity and electrical conductivity of aerogels. The hybrid aerogels demonstrate superb EMI shielding performance (SET of 100.9 dB at 1 mm, SSE/t of 134029 dB cm^2 g^{-1}) and impressive Joule heating properties with ultralow-driven-voltage (238.5 °C at 1.2 V), rapid heating rate (390 °C s^{-1}), superhydrophobicity (contact angle of 154.7°), and excellent stability in severe environments.
Image credit: Dr Mingyu Li

As featured in:

See Wenbo Zhu, Mingyu Li *et al.*, *J. Mater. Chem. A*, 2023, **11**, 25887.

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