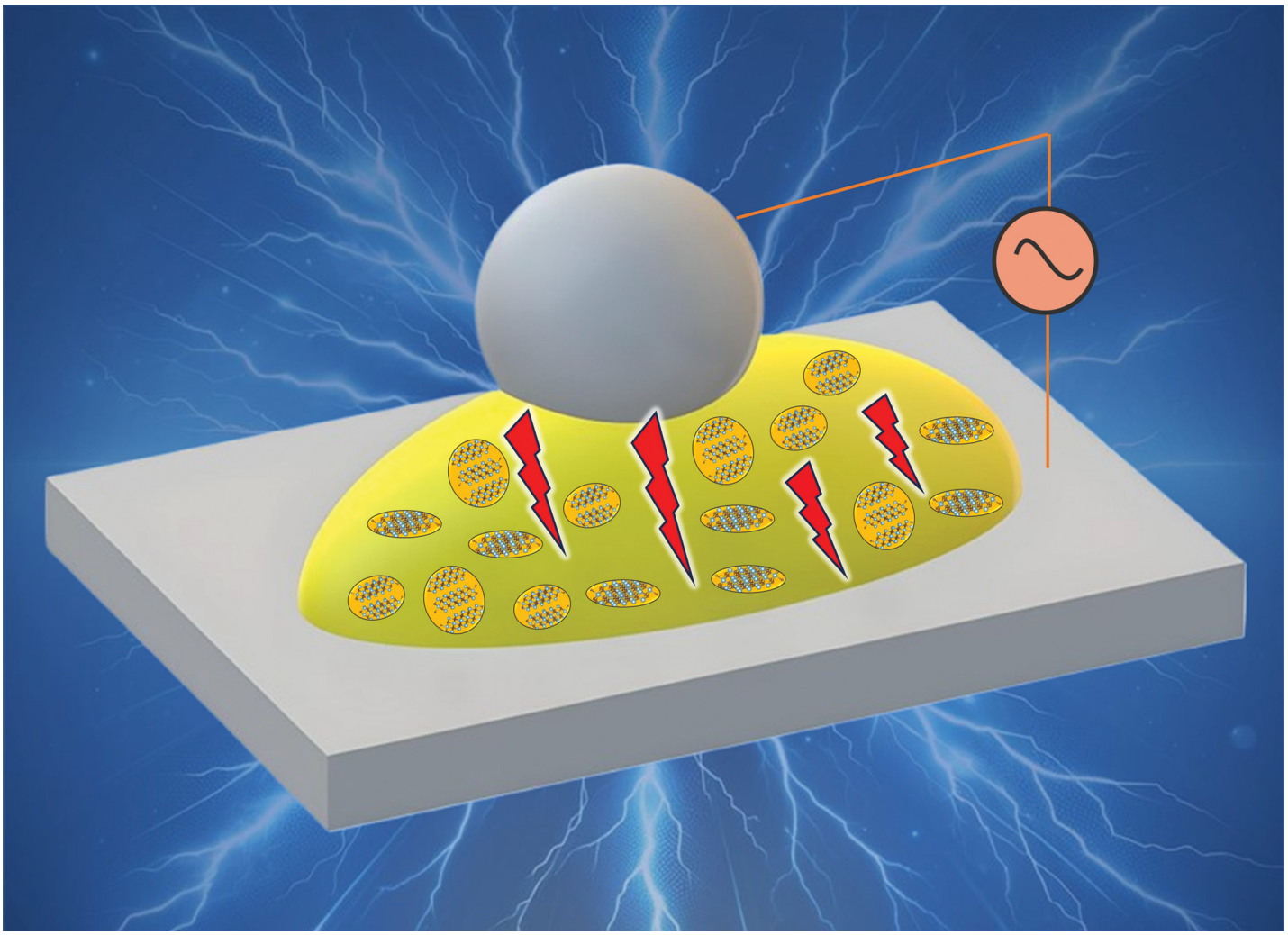

Showcasing research from Professor Hong Liang's Surface Science laboratory, Mechanical Engineering, Texas A&M University, College Station, Texas, USA

Tribo-electrical evaluation of conductive fluid film of $Ti_3C_2T_z$ MXene-containing lubricant

This research utilized an integrated approach to measure the impedance of a mineral oil consisting of (ML)-$Ti_3C_2T_z$ MXene nanoparticles as additive. It was revealed that the addition of 0.06 wt% of ML-$Ti_3C_2T_z$ MXene reduces friction for up to 60% compared to pure mineral oil. The additive in addition increased the lubricant's electrical conductivity and promoted rapid formation of a lubricating film between two steel surfaces.

The cover image was created by M. Humaun Kabir, a Ph.D. student at the Texas A&M University.

As featured in:

See Hong Liang *et al.*, *Mater. Adv.*, 2024, **5**, 5063.

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