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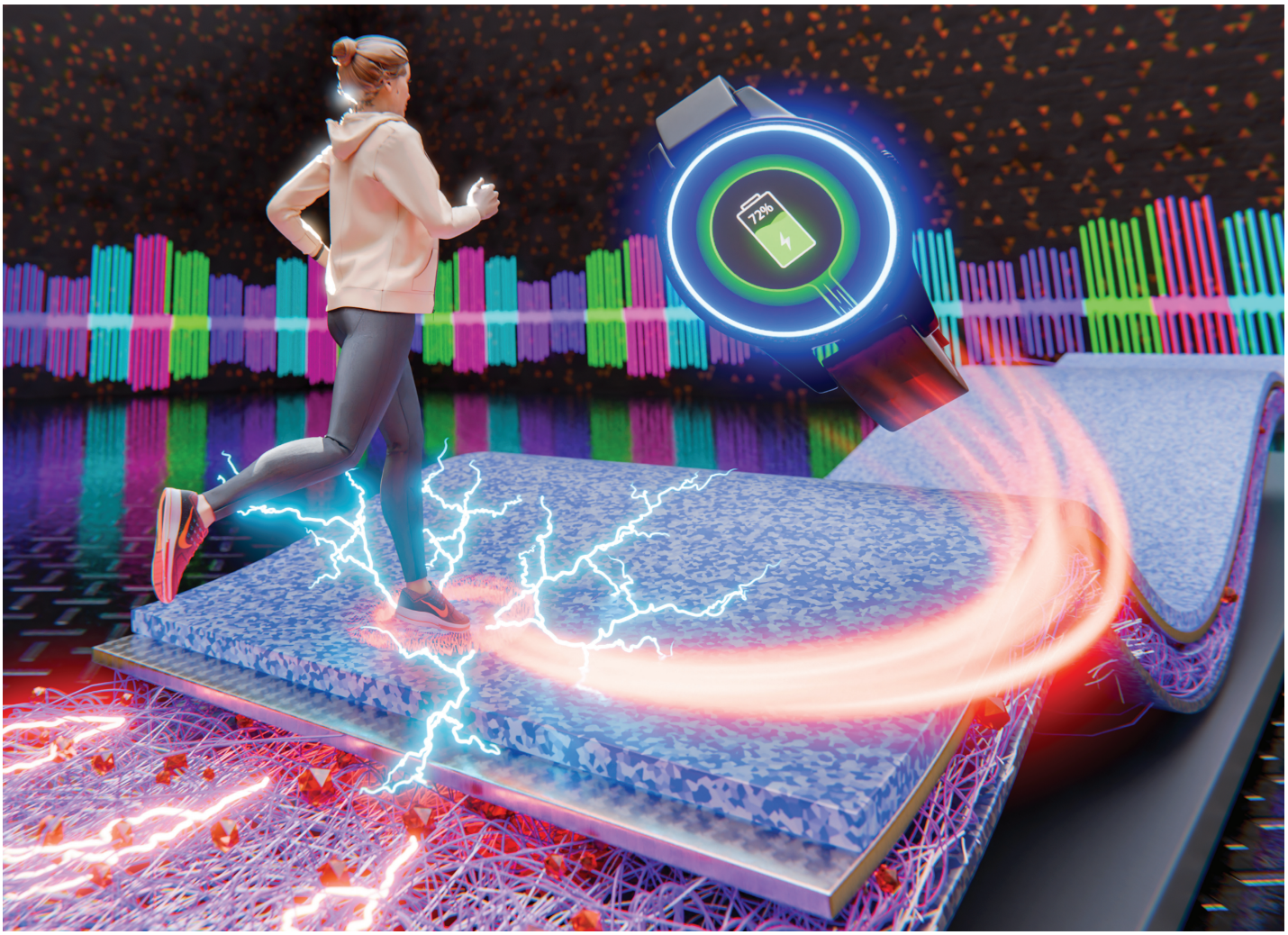

Showcasing research from Professor Misra's laboratory, Department of Electrical and Computer Engineering, North Carolina State University, Raleigh, NC, USA.

Triboelectric nanogenerator based on electrospun molecular ferroelectric composite nanofibers for energy harvesting

Traditional ceramic-based ferroelectrics, while effective for triboelectric energy harvesting, are limited by brittleness and poor flexibility. To address this, we explored the use of diisopropylammonium bromide (DIPAB) in a flexible electrospun triboelectric nanogenerator (TENG). By combining DIPAB with P(VDF-TrFE), we created a high-performance TENG that produced 203.8 V and a maximum power density of 416.2 mW m^{-2}. This system effectively powered commercial capacitors and LEDs, demonstrating its potential for sustainable, wearable energy solutions. Our method is reliable, cost-effective, and scalable, promising significant advances in wearable electronics energy harvesting.

As featured in:

See Veena Misra *et al.*, *RSC Appl. Polym.*, 2024, **2**, 634.

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