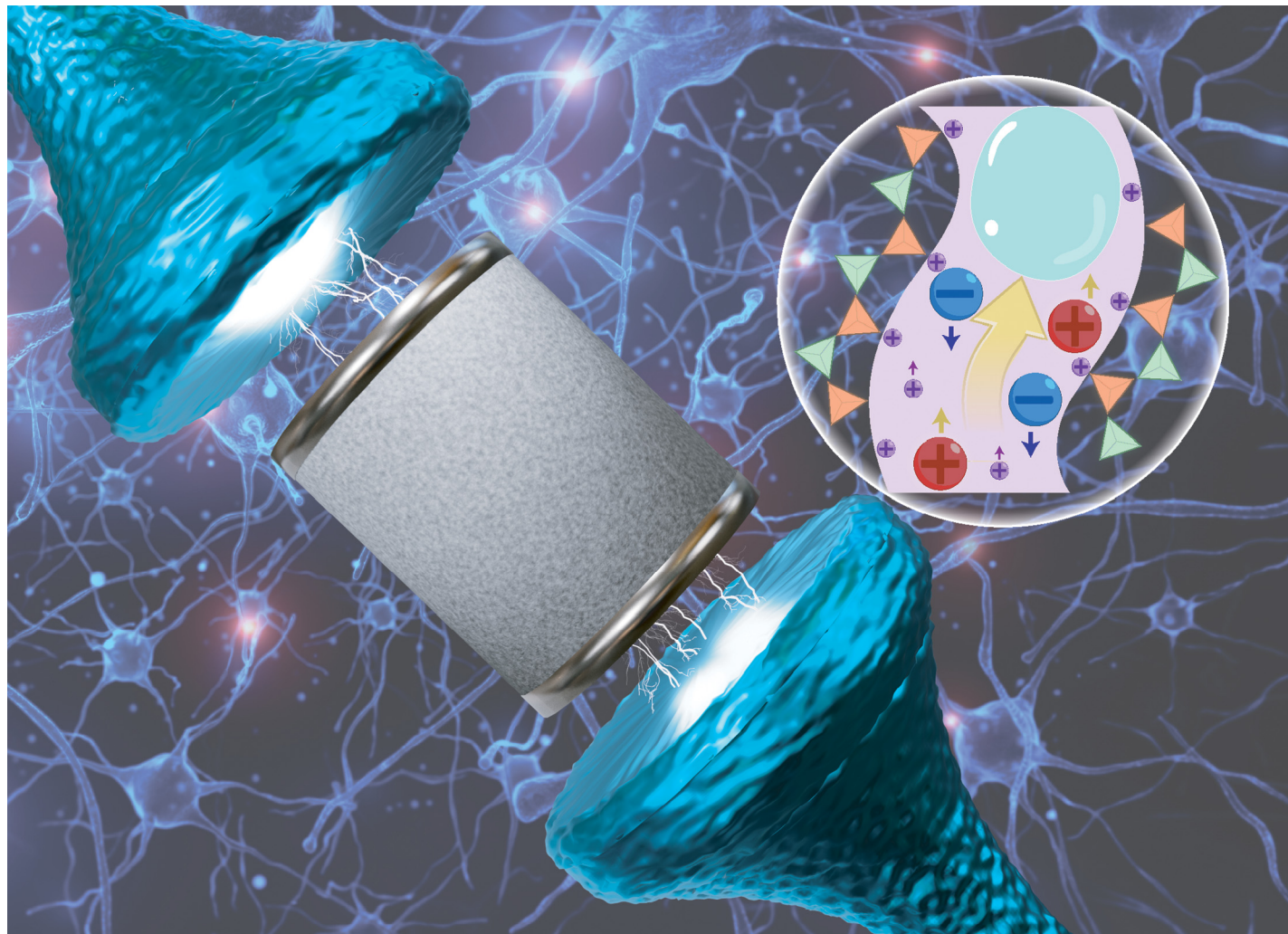




Showcasing collaborative research from the groups of Professors Caterina Lamuta (University of Iowa), Reza Montazami (Iowa State University) and Stephen A. Sarles (University of Tennessee)

Scaled-down ionic liquid-functionalized geopolymer memristors

Inspired by biological synapses, memristors are the functional units of neuromorphic computing. Low-cost geopolymer memristors have been fabricated at micron-scale for more enhanced applicability in neuromorphic computing. Devices were functionalized with ionic liquids, significantly improving their longevity and retention of resistive switching capabilities. A collection of synaptic plasticity properties were demonstrated, paving the way for their use in next-generation smart infrastructure. Background by onimate *via* Adobe Stock.

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As featured in:



See Stephen A. Sarles, Caterina Lamuta, Reza Montazami *et al.*, *Mater. Horiz.*, 2025, **12**, 4208.