Environmental Science: Advances

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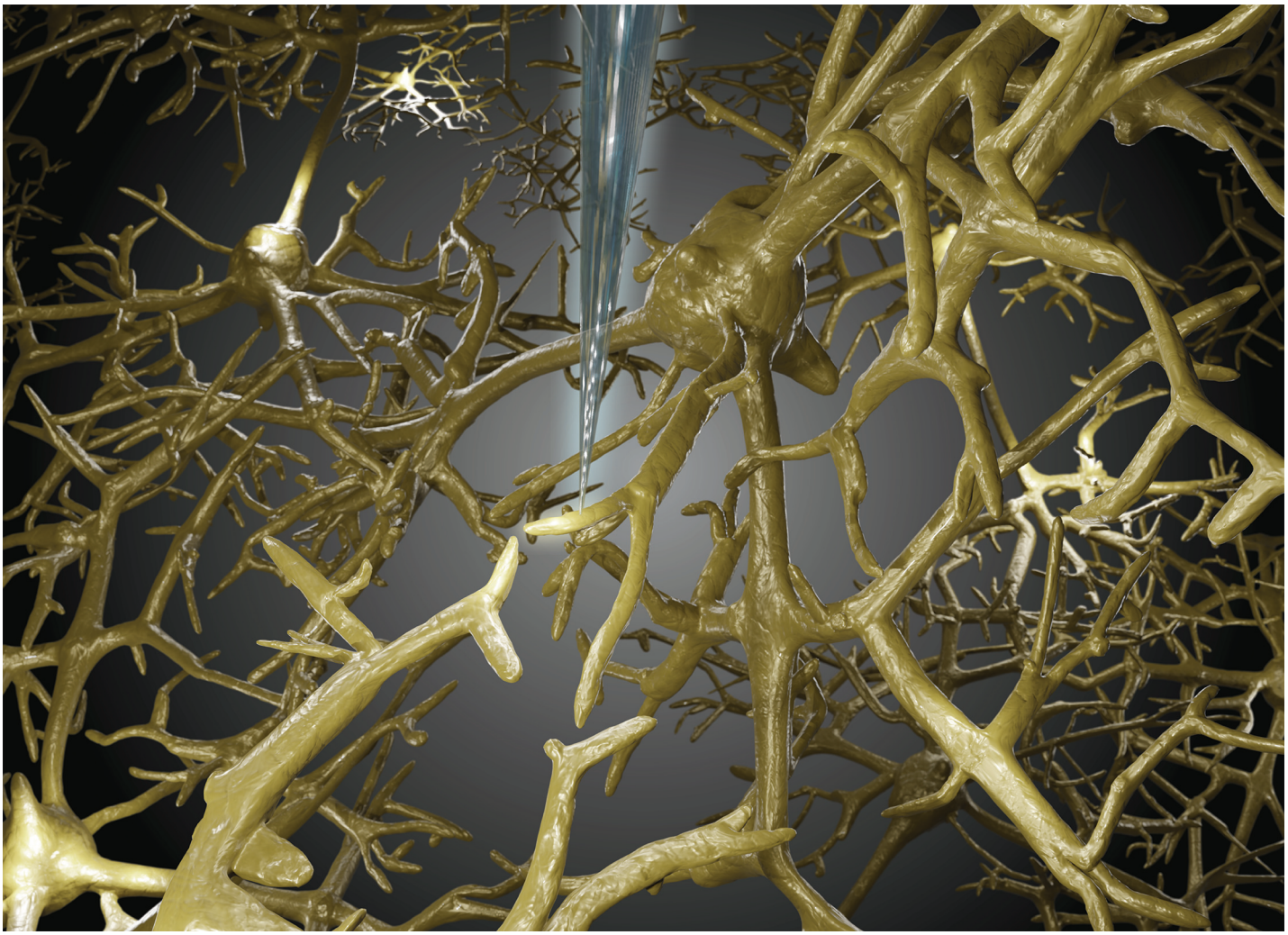


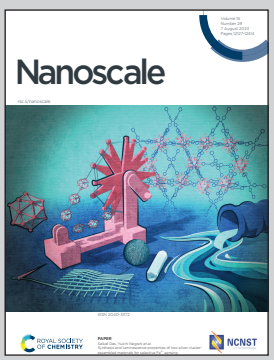
Showcasing research from Dr Rouach's laboratory, Centre for Interdisciplinary Research in Biology, Collège de France, Paris, France.

Diversity of dynamic voltage patterns in neuronal dendrites revealed by nanopipette electrophysiology

Using quartz glass nanopipettes, we can perform electrophysiology at the level of nanoscale neuronal compartments. In this work, we reveal a diversity of synaptically-driven voltage dynamics in fine neuronal dendrites by directly recording their membrane potentials for sustained time periods using nanopipettes. The array of voltage dynamics we observed consists of oscillating periods of firing activity and silence, spontaneous events, bursting events and a novel class of events in the form of transient and sustained hyperpolarisations.

Image credit: Dr Jeffrey Mc Hugh.

As featured in:



See Jeffrey Mc Hugh, Nathalie Rouach *et al.*, *Nanoscale*, 2023, **15**, 12245.

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