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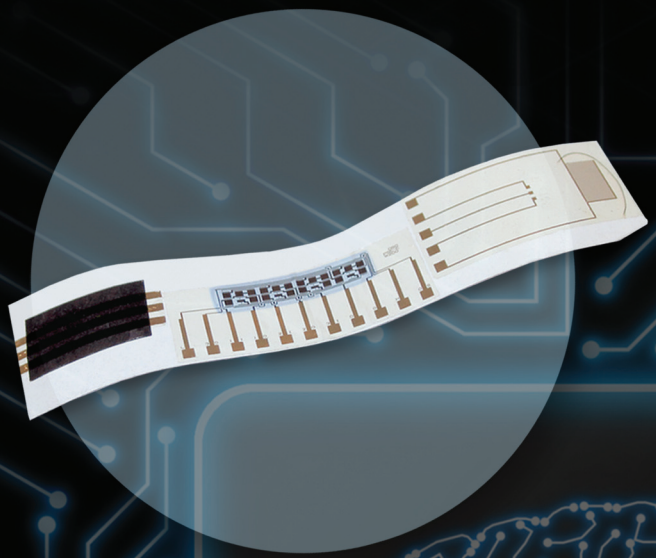
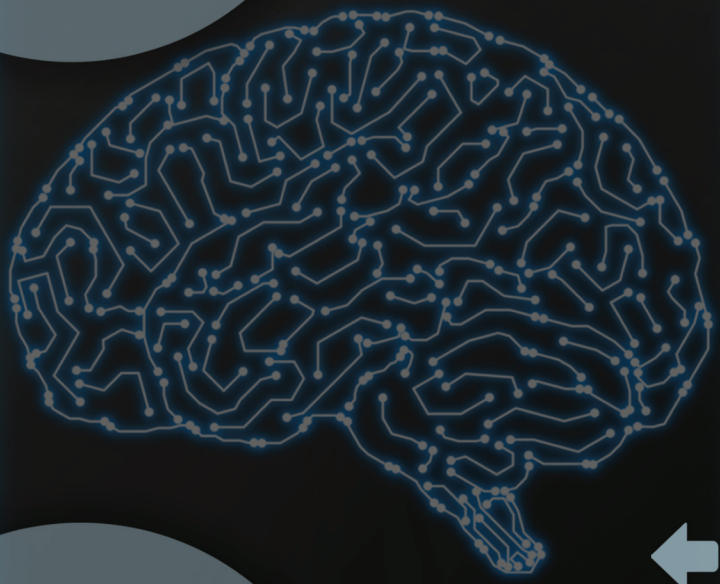
Organic semiconductors for brain-inspired computing





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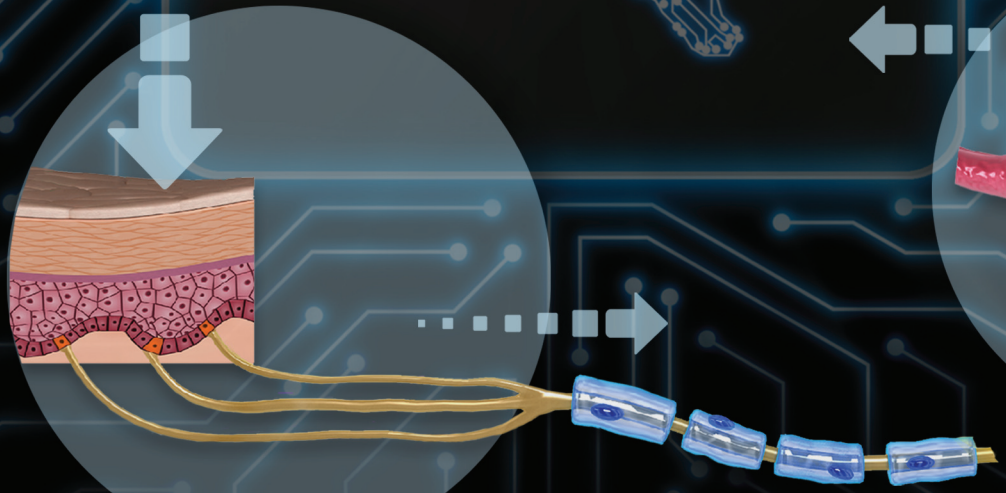

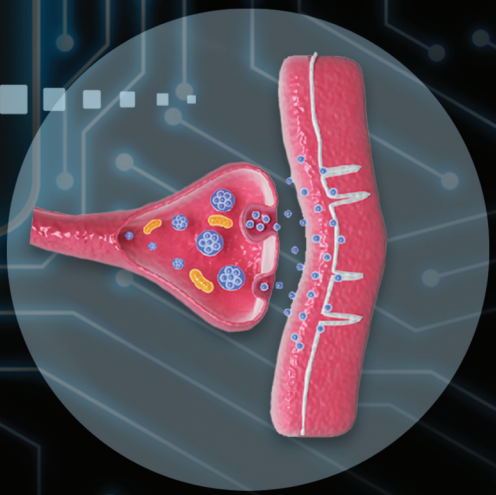

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TECHNICAL FEATURE

ON THE COVER

Organic semiconductors for brain-inspired computing. The next generation of neuromorphic computing must not just simulate but rather more effectively emulate neural functions. This has led to a surge in research activity to discover and revisit materials systems that efficiently implement various neural functions. This issue of *MRS Bulletin* describes the multiple avenues by which neural processes have been pursued in the past decades, and future opportunities and challenges that lie ahead for the field of neuromorphic devices using organic materials. The cover features a schematic of an afferent nerve, where applied pressure initiates action potentials in nature. The artificial afferent nerve is comprised of pressure sensors, a ring oscillator, and a three-terminal neuromorphic device (synaptic transistor). Adapted with permission from *Science* (AAAS). See the technical theme that begins on p. **619**.

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The Materials Research Society (MRS), a not-for-profit scientific association founded in 1973 and headquartered in Warrendale, Pennsylvania, USA, promotes interdisciplinary materials research. Today, MRS is a growing, vibrant, member-driven organization of over 16,000 materials researchers spanning over 80 countries, from academia, industry, and government, and a recognized leader in the advancement of interdisciplinary materials research.

The Society's interdisciplinary approach differs from that of single-discipline professional societies because it promotes information exchange across many scientific and technical fields touching materials development. MRS conducts three major international annual meetings and also sponsors numerous single-topic scientific meetings. The Society recognizes professional and technical excellence and fosters technical interaction through University Chapters. In the international arena, MRS implements bilateral projects with partner organizations to benefit the worldwide materials community. The Materials Research Society Foundation helps the Society advance its mission by supporting various projects and initiatives.

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