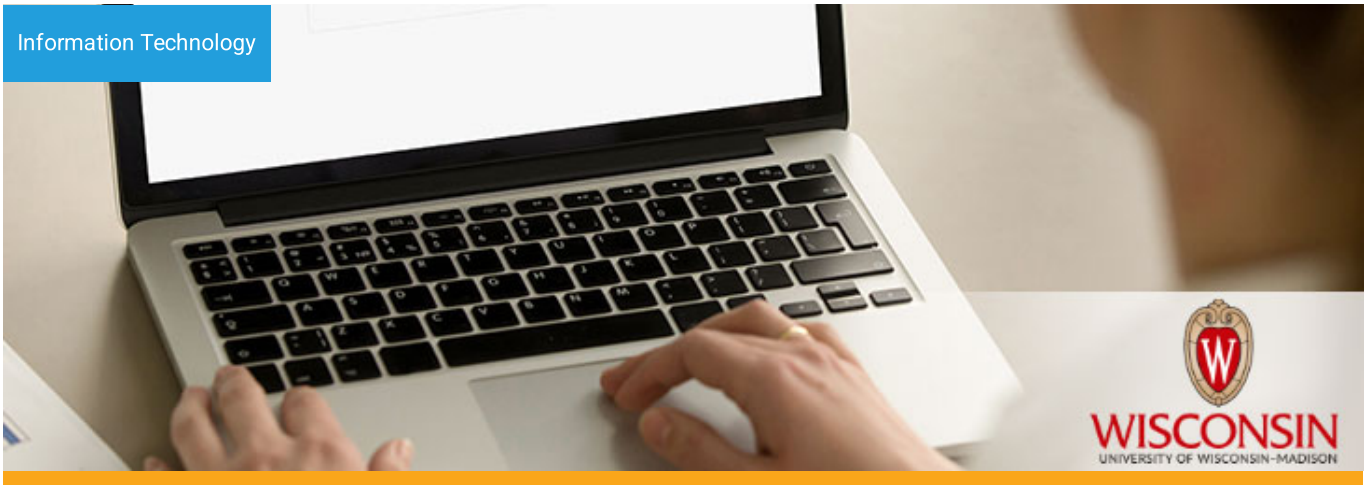
Information Technology



PHOTONIC STATIC RANDOM ACCESS MEMORY

View U.S. Patent Application Publication No. US-2026-0177883 in PDF format.

WARF: P240245US01

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The Invention

UW-Madison researchers, along with their collaborators at USC, propose a photonic-SRAM structure using differential photodiode and micro-ring resonators (MRRs) to provide a building block for general purpose optical computing. This innovation doesn't use ultra-low dark current photodiodes, which are expensive and not readily available, and has better robustness than other photonic SRAM. In addition, the innovators designed a low static leakage and high-driving strength pSRAM structures for low-power, high-speed operation. There are various implementations that the circuits can take, with key components and methods that link groups of them. The key components are differential photodiodes that drive two micro-ring resonators. Variations of the designs would be selected based on any trade-offs the end applications might require around efficiency, speed, etc.

Tech Fields

- Information Technology : Hardware

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846