

Environmental Science: Advances

GOLD
OPEN
ACCESS

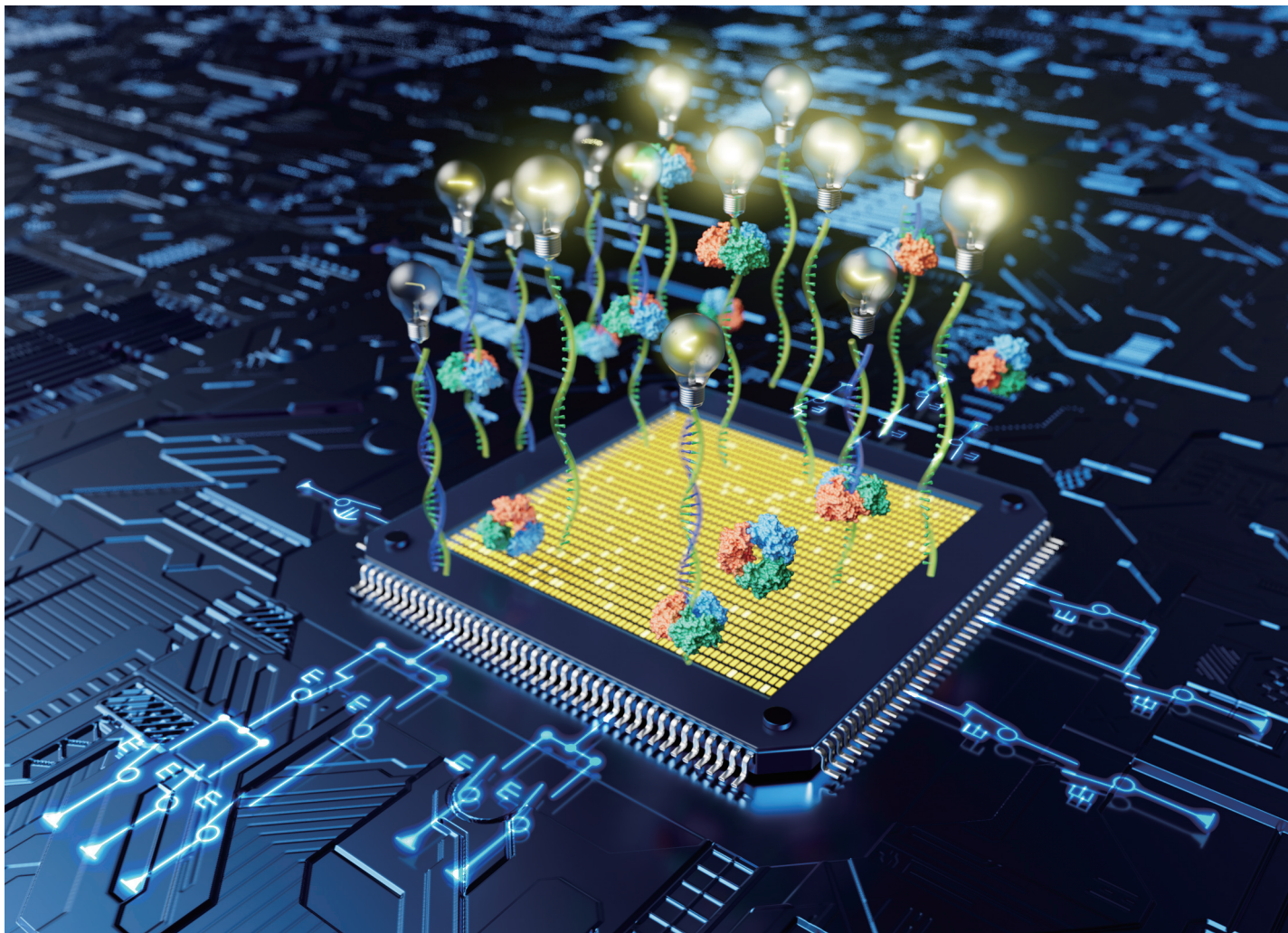
Uniting disciplines to solve
environmental challenges

APCs waived until mid-2024

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Fundamental questions
Elemental answers

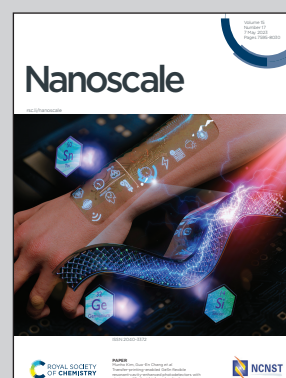


Showcasing research from Prof. Qiang Zhang's group at School of Computer Science and Technology, Dalian University of Technology, Dalian, China.

Construction of DNA-based molecular circuits using normally open and normally closed switches driven by lambda exonuclease

Based on the lambda exonuclease, the normally open and closed switching strategy with a unified signal transmission mechanism has been proposed to optimize and simplify the design of the molecular circuits. The function to implement the NOT logic, time-responsive molecular switch, and time-delay relay with potential for the automatic control are achieved through this strategy, and the possibility of building large-scale molecular circuits has been confirmed by the developed digital computing circuits.

As featured in:



See Qiang Zhang *et al.*, *Nanoscale*, 2023, 15, 7755.