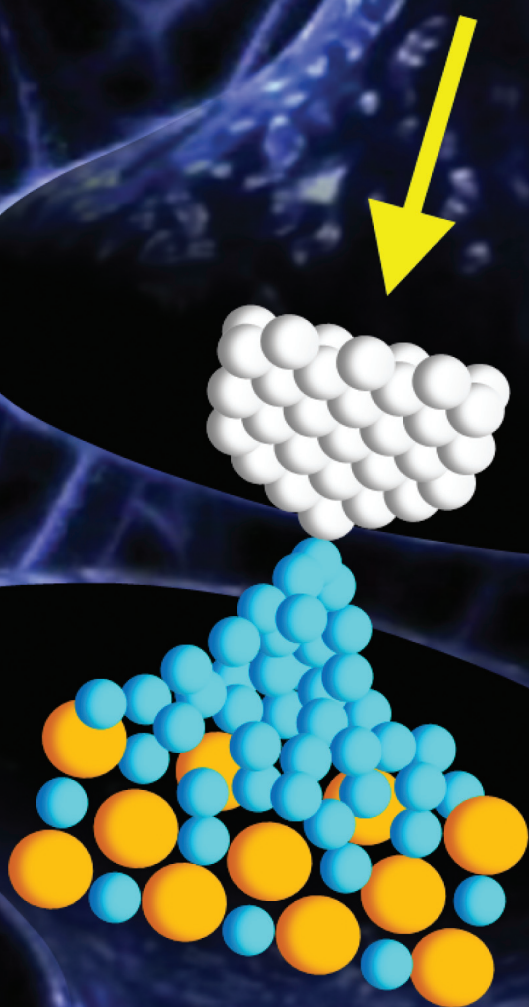


# ADVANCED FUNCTIONAL MATERIALS



## BIOMIMETICS

Representing a synapse, which is the basic unit of neural communication in the human brain, by a single device is a challenging task. On page 3606, Alpana Nayak and co-workers represent a synapse by a single solid-state electrochemical nanodevice called a  $\text{Cu}_2\text{S}$  gap-type atomic switch. The switch exhibits the sensory, short- and long-term memories and shows the potential for perceiving two important environmental factors, namely air and temperature.