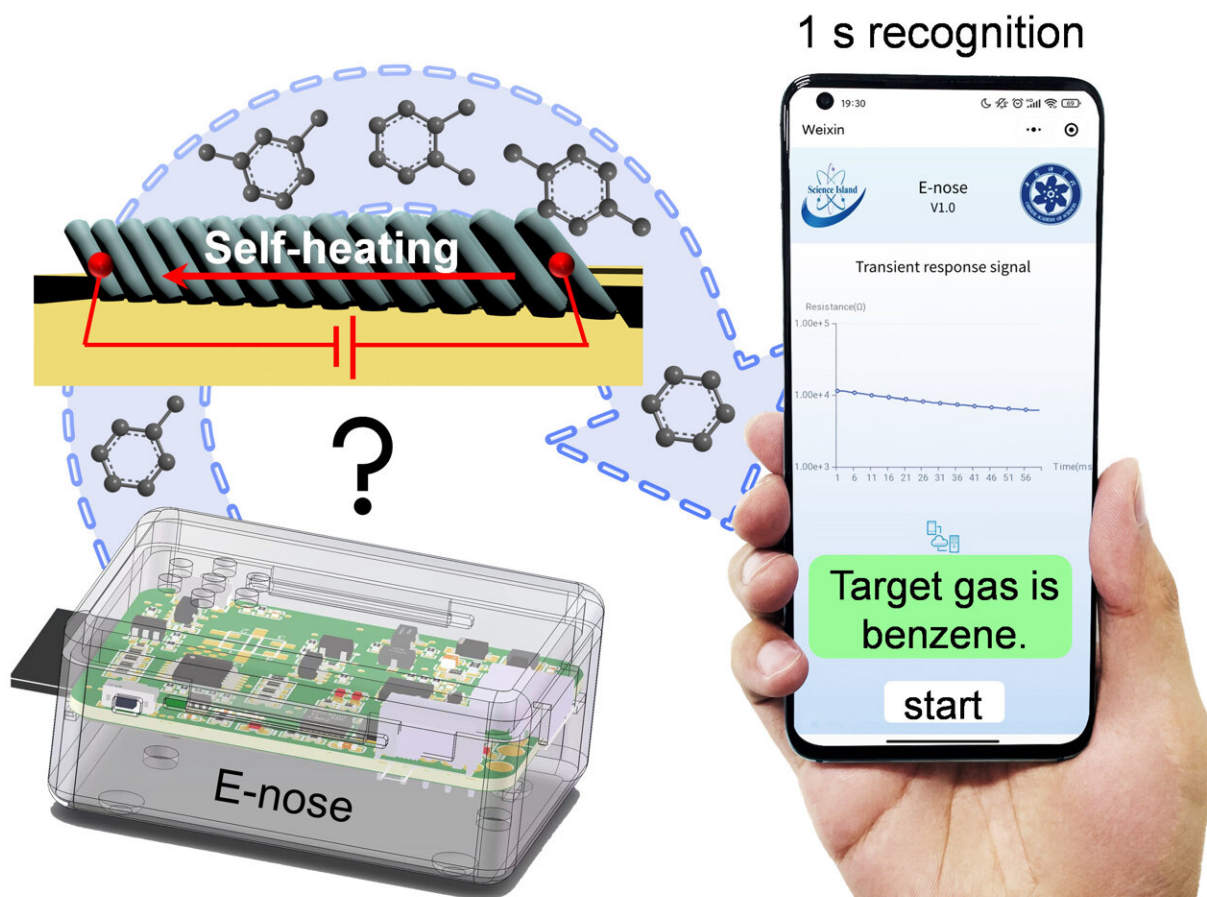


# Smart e-nose uses self-heating temperature modulation to enable rapid identification of gas molecules

February 19 2024, by Zhang Nannan



Smart E-nose system based on the self-heating temperature modulation. Credit: Li Meng

A recent study [published](#) in *ACS Sensors* highlights the development of a smart electronic nose (e-nose) by a research team led by Prof. Meng Gang from the Hefei Institutes of Physical Science of the Chinese Academy of Sciences.

The novel e-nose utilizes a self-heating modulation strategy to accurately distinguish different types of target gas molecules within just one second.

Significant progress has been made in gas molecule detection using e-nose comprised of non-selective [semiconductor](#) gas sensors. However, extracting adequate molecular features in a short time (

Citation: Smart e-nose uses self-heating temperature modulation to enable rapid identification of gas molecules (2024, February 19) retrieved 28 April 2024 from <https://phys.org/news/2024-02-smart-nose-temperature-modulation-enable.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.