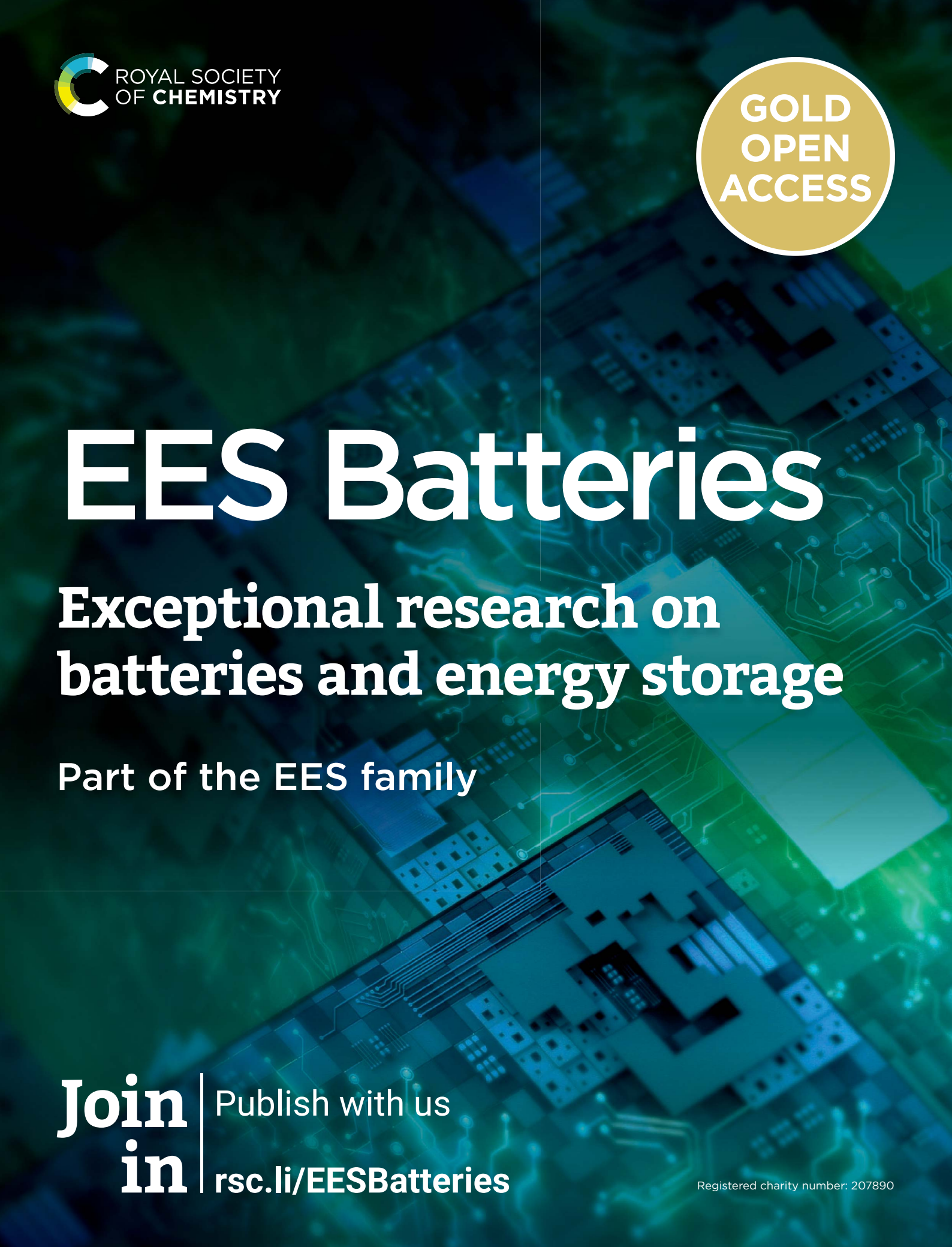
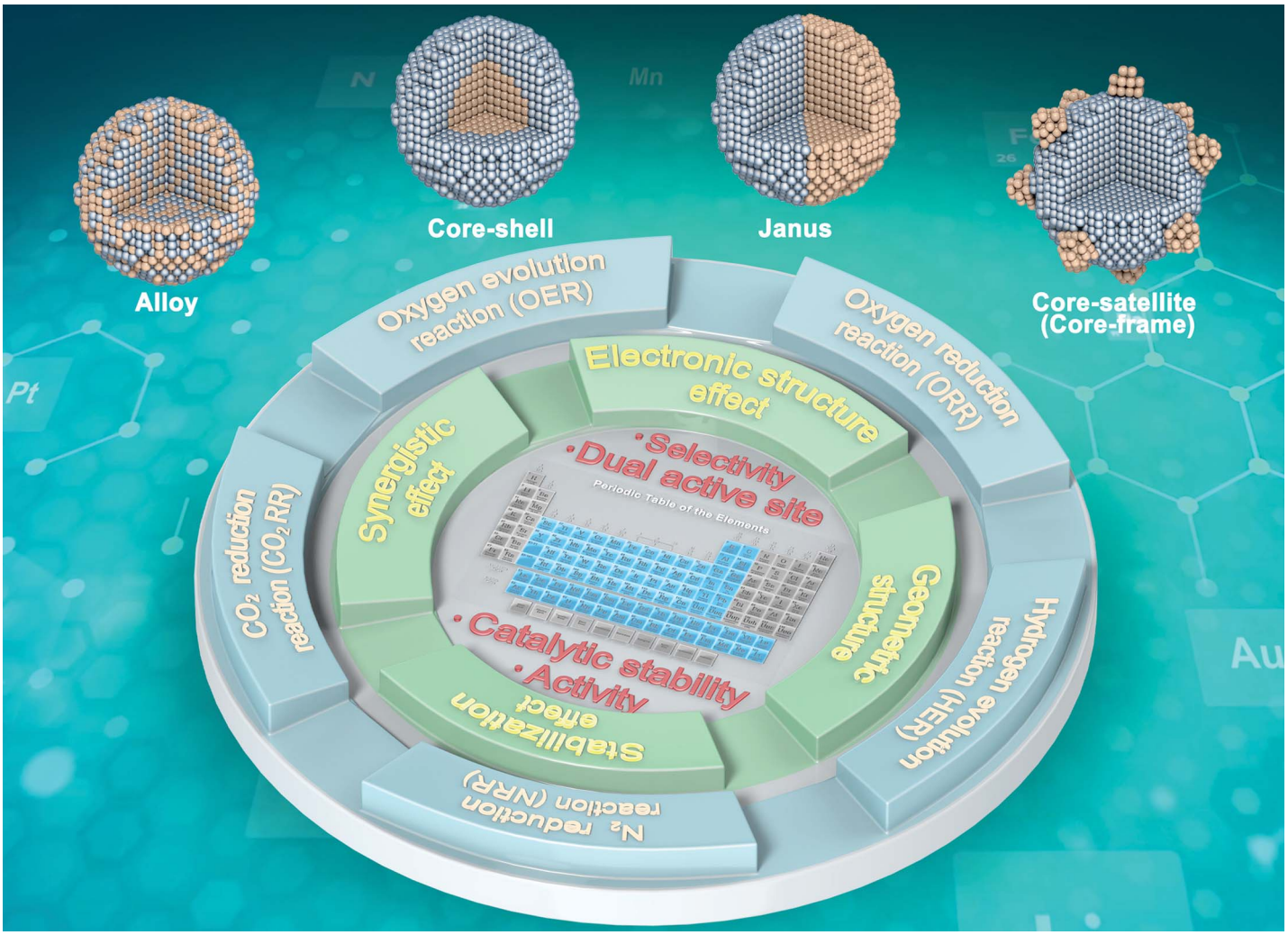

ROYAL SOCIETY OF CHEMISTRY
GOLD OPEN ACCESS
EES Batteries
Exceptional research on batteries and energy storage
Part of the EES family
Join in
Publish with us
rsc.li/EESBatteries
Registered charity number: 207890



Showcasing research from Professor Hongxing Dai's laboratory, College of Materials Science and Engineering, Beijing University of Technology, Beijing, China.

Bimetallic nanoparticles: advances in fundamental investigations and catalytic applications

This review covers recent advances in the preparation methods and catalytic applications of bimetallic nanomaterials. The relationships between structural features and catalytic properties of different bimetals are discussed. Deactivation and regeneration of the catalysts are highlighted, which are essential for catalyst design and optimization. Typical reactions, such as catalytic oxidation, hydrogen evolution reaction, and carbon dioxide reduction, are provided to demonstrate the wide range of catalytic applications of bimetallic catalysts. Furthermore, fundamental understanding and strategies to design specific bimetallic components and dual active sites are prospected for potential industrial applications.

As featured in:

See Yuxi Liu, Hongxing Dai *et al.*, *Environ. Sci.: Adv.*, 2025, **4**, 33.

ROYAL SOCIETY OF CHEMISTRY

rsc.li/esadvances

Registered charity number: 207890