ROYAL SOCIETY OF CHEMISTRY

Royal Society of Chemistry approved training courses

Explore your options.
Develop your skills.
Discover learning that suits you.

Courses in the classroom, the lab, or online

Find something for every stage of your professional development. Search our database by:

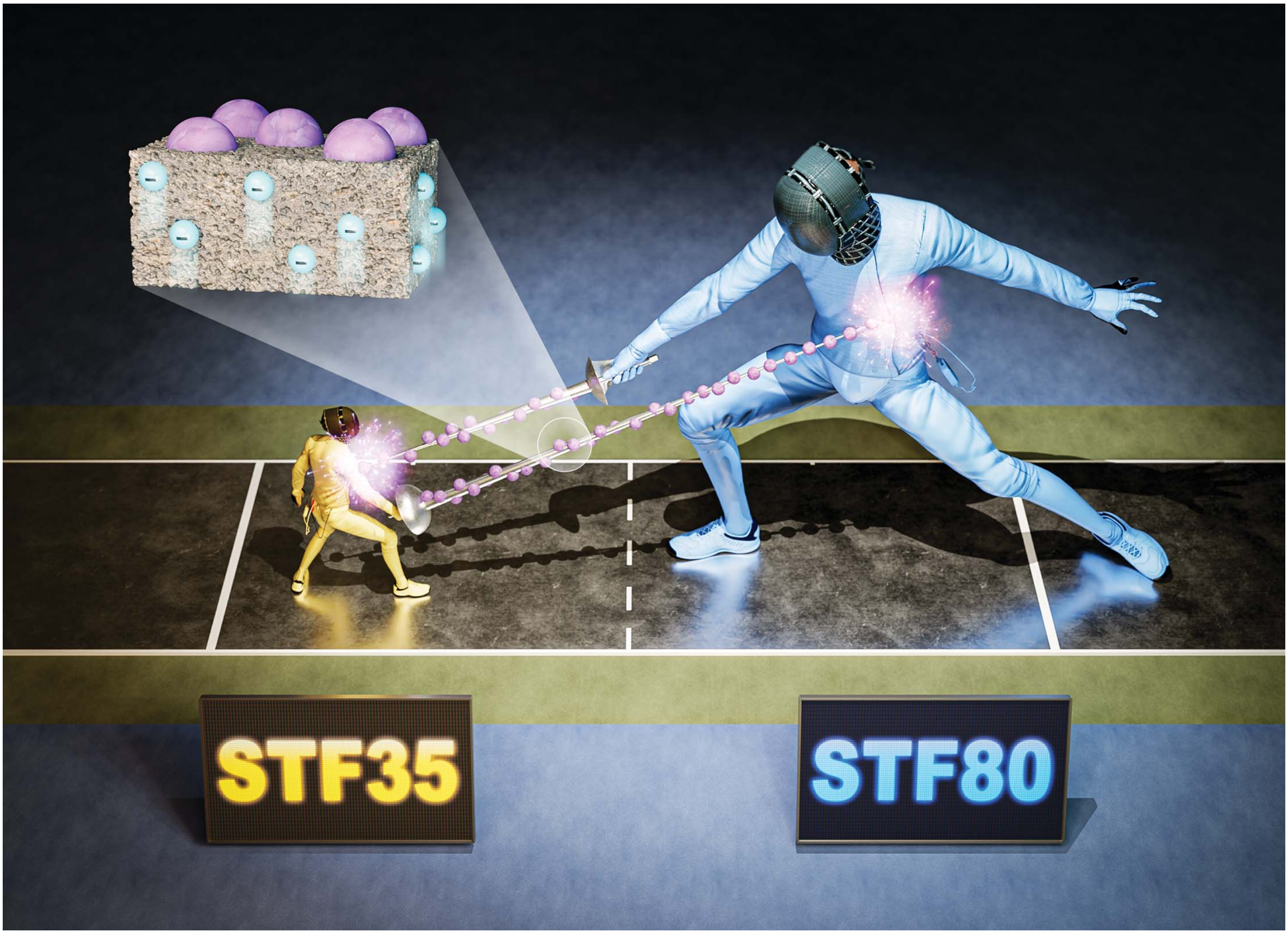
- subject area
- location
- event type
- skill level

Members **get at least 10% off**

Visit **rsc.li/cpd-training**

SAVE 10%

Registered charity number: 207890



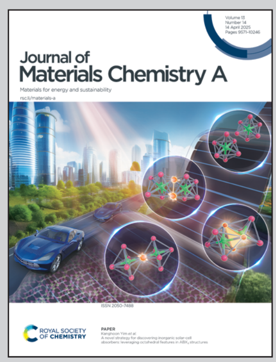
Showcasing research from Professor WooChul Jung's laboratory of Seoul National University and Professor Harry L. Tuller's laboratory of Massachusetts Institute of Technology.

Unveiling critical role of metal oxide infiltration in controlling the surface oxygen exchange activity and polarization of $SrTi_{1-x}Fe_xO_{3-\delta}$ perovskite oxide electrodes

The acid-base approach was applied to perovskite-oxide electrocatalysts by studying the effects of CaO (basic) and Al_2O_3 (acidic) infiltration on $SrTi_{1-x}Fe_xO_{3-\delta}$ (STF*x*) oxygen exchange kinetics. Infiltrating CaO into STF35 (35% Fe) increased the oxygen exchange rate 40-fold, nearly matching STF80. While uninfiltrated samples show a strong dependence on iron content, infiltration causes convergence in exchange rates. This suggests that low-iron STF*x*, with improved mechanical, thermal, and chemical stability, can be optimized *via* infiltration for enhanced electrocatalytic performance.

Image reproduced by permission of WooChul Jung from *J. Mater. Chem. A,* 2025, **13**, 9708.

As featured in:



See Harry L. Tuller, WooChul Jung *et al.*, *J. Mater. Chem. A,* 2025, **13**, 9708.

ROYAL SOCIETY OF CHEMISTRY

rsc.li/materials-a

Registered charity number: 207890