

Advance your career in science

with professional recognition that showcases
your **experience, expertise and dedication**

Stand out from the crowd

Prove your commitment
to attaining excellence in
your field

Gain the recognition you deserve

Achieve a professional
qualification that inspires
confidence and trust

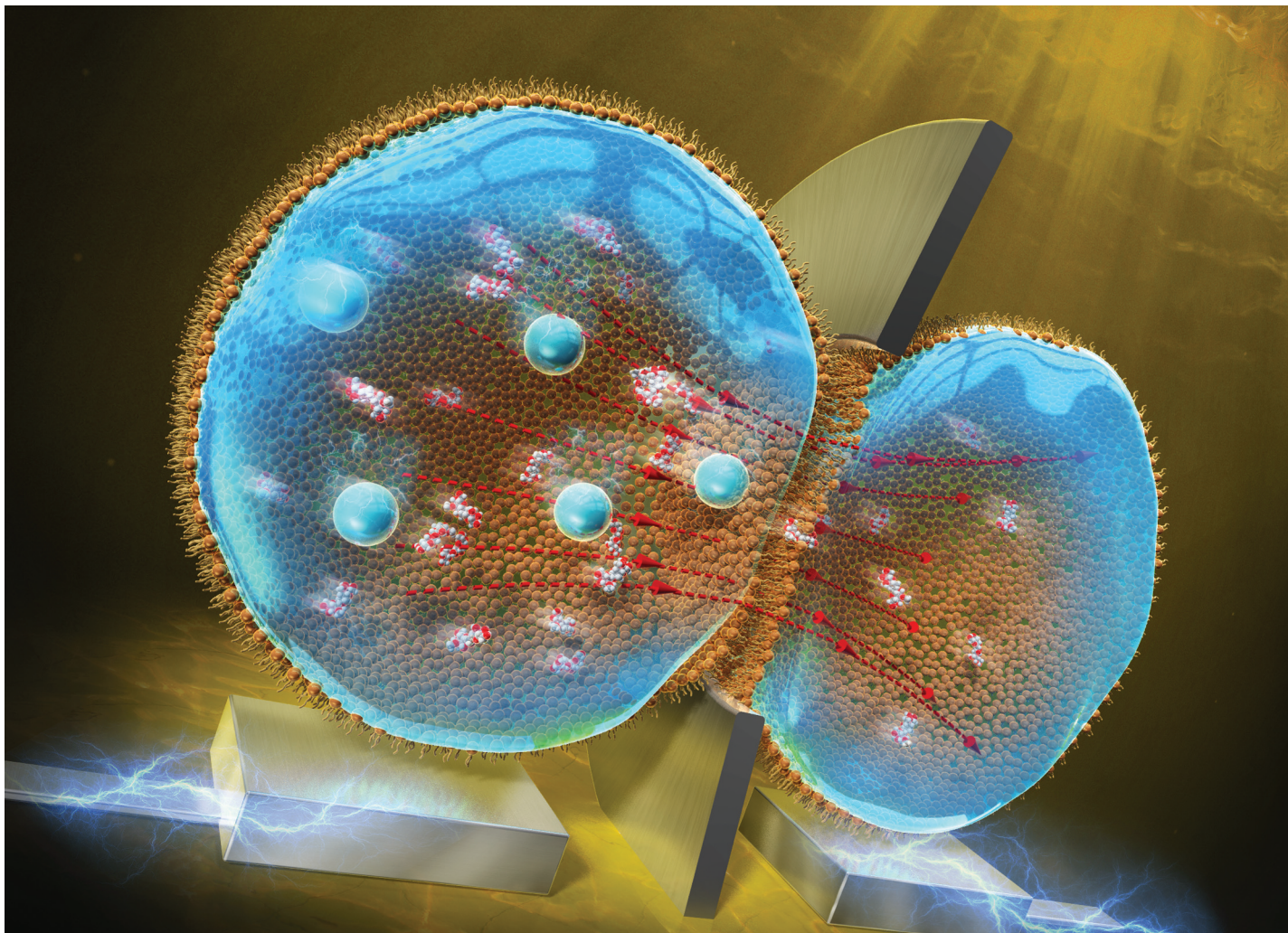
Unlock your career potential

Apply for our professional
registers (RSci, RSciTech)
or chartered status
(CChem, CSci, CEnv)

Apply now

rsc.li/professional-development





Showcasing research from the group of Dr Hideya Nakamura,
Department of Chemical Engineering,
Osaka Metropolitan University, Japan

Enhancement of cell membrane permeability by using
charged nanoparticles and a weak external electric field

This study investigated cell-membrane crossing of dextran with M_w of 3000–5000 using charged nanoparticles and a weak external electric field. Even when the applied electric field was below the critical strength for membrane breakdown, dextran was able to cross the membrane without causing membrane breakdown. These results indicate that adding nanomaterials under a weak electric field can enhance the translocation of delivery compounds across the membrane with less damage, suggesting a new strategy for intracellular delivery systems.

As featured in:



See Hideya Nakamura *et al.*,
Phys. Chem. Chem. Phys.,
2023, **25**, 32356.