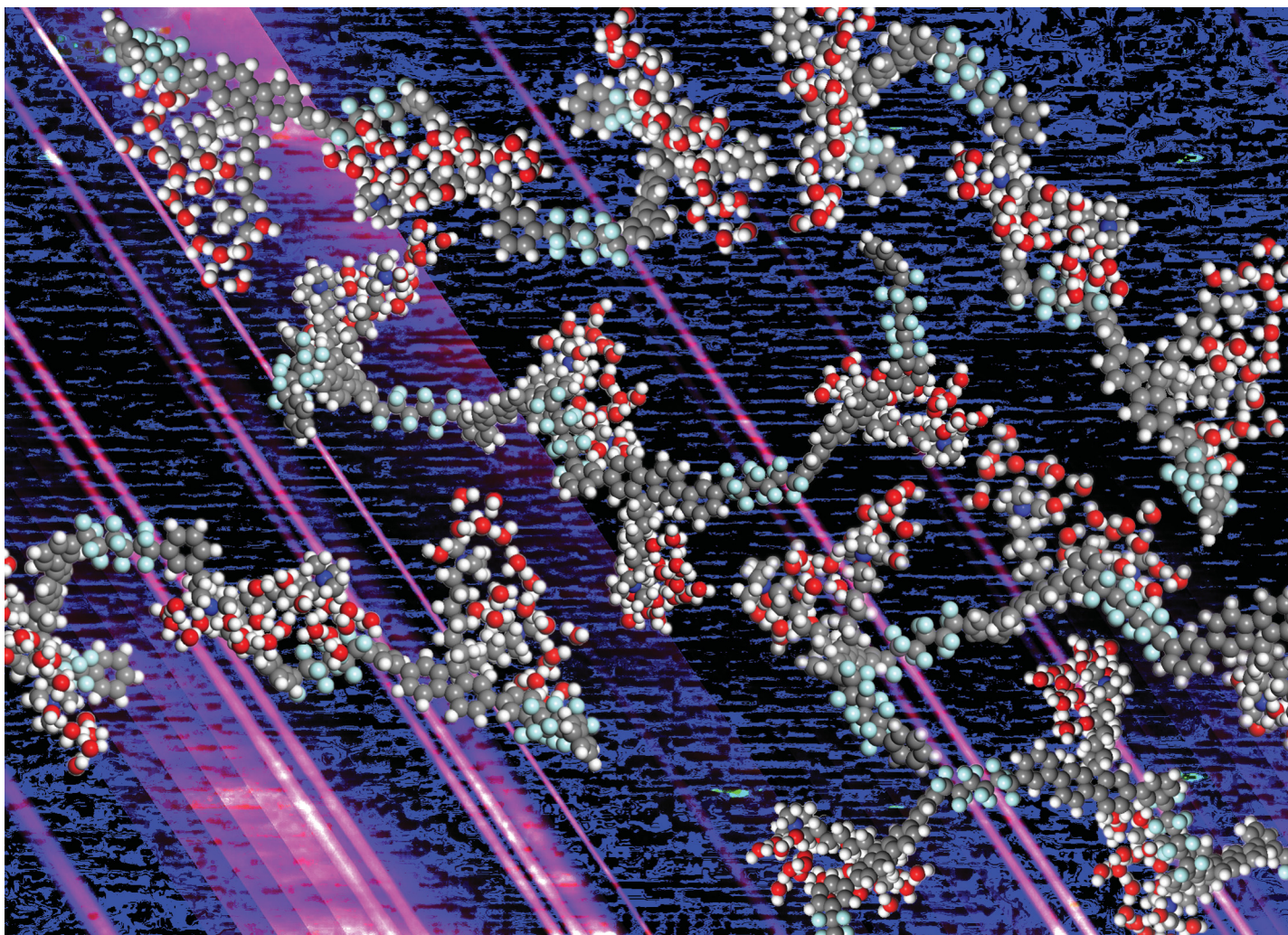


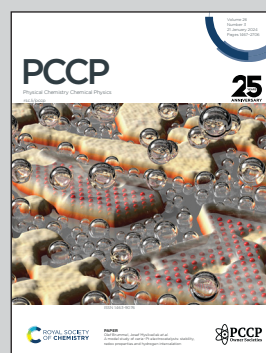


**Showcasing research from the Junji Inukai group,
Clean Energy Research Center, University of Yamanashi,
Japan**

Various states of water species in an anion exchange membrane characterized by Raman spectroscopy under controlled temperature and humidity

The Inukai group investigates the structure and dynamics of water in electrolyte membranes, especially in running fuel cells. The vibrational spectra of an anion exchange membrane and resident water molecules were obtained by Raman spectroscopy for the first time. Water interacting with water, water interacting with OH^- , non-H-bonded OH in water, and isolated OH^- were clearly distinguishable with the aid of DFT calculations. This work helps promote the development of non-PGM fuel cells and water electrolyzers.

As featured in:



See Junji Inukai *et al.*,
Phys. Chem. Chem. Phys.,
2024, **26**, 1658.