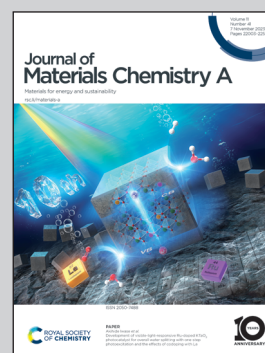


Showcasing research on nanostructured polymer membranes for water-treatment by Professor Takashi Kato's laboratory (The University of Tokyo, Japan), Professor Hiroyuki Katayama's laboratory (The University of Tokyo, Japan) and Dr Tsuyoshi Hayashi (National Institute of Infectious Diseases, Japan).

Development of liquid-crystalline smectic nanoporous membranes for the removal of SARS-CoV-2 and waterborne viruses

Nanostructured membranes prepared via photopolymerization of ionic liquid-crystalline smectic compounds effectively rejected viruses from water. The compound was designed to form smectic phases to improve the water permeability of membrane. The two-dimensional nanopores removed viruses of various sizes, including SARS-CoV-2, in very high efficiency.

As featured in:



See Takeshi Sakamoto, Hiroyuki Katayama, Takashi Kato *et al.*, *J. Mater. Chem. A*, 2023, **11**, 22178.