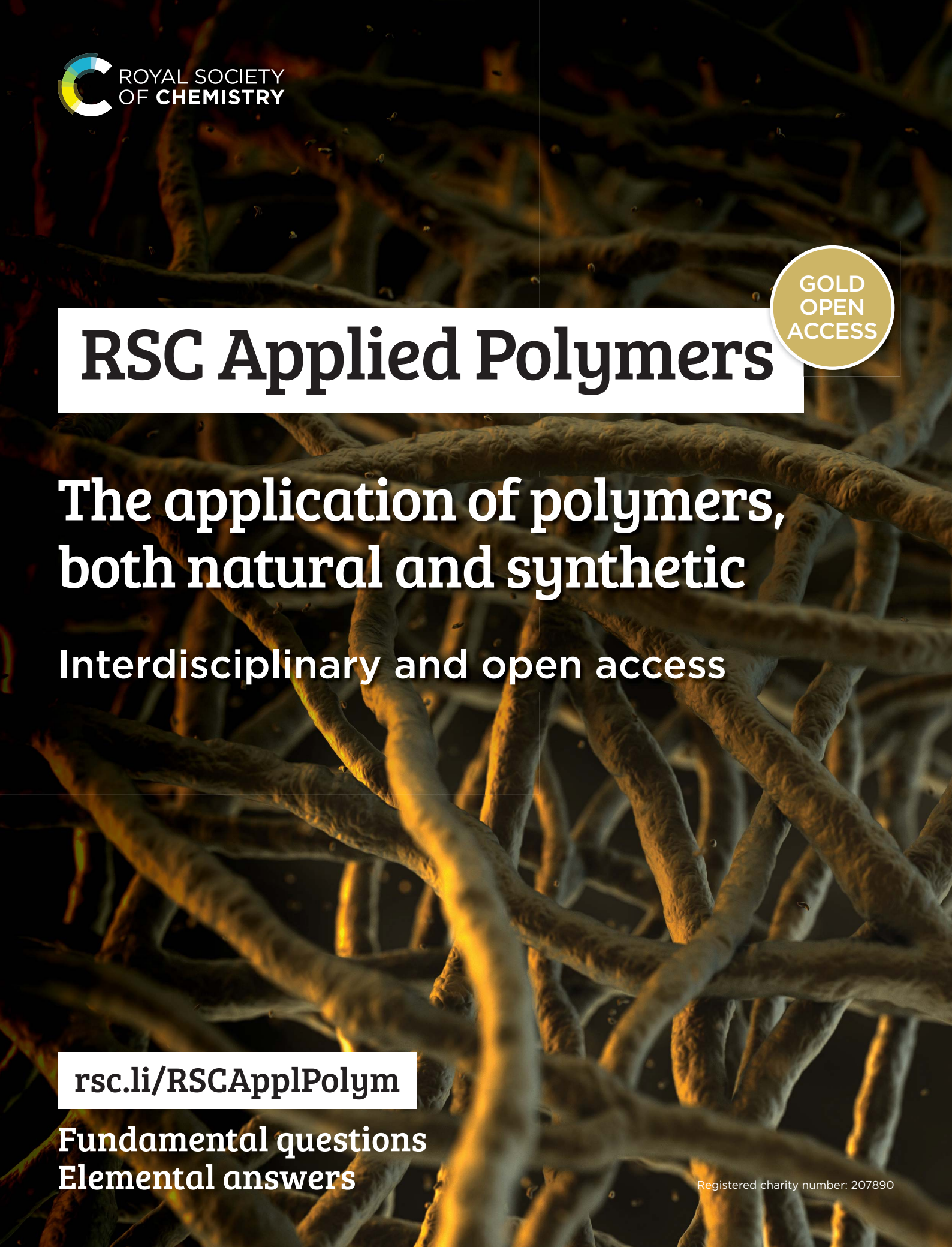
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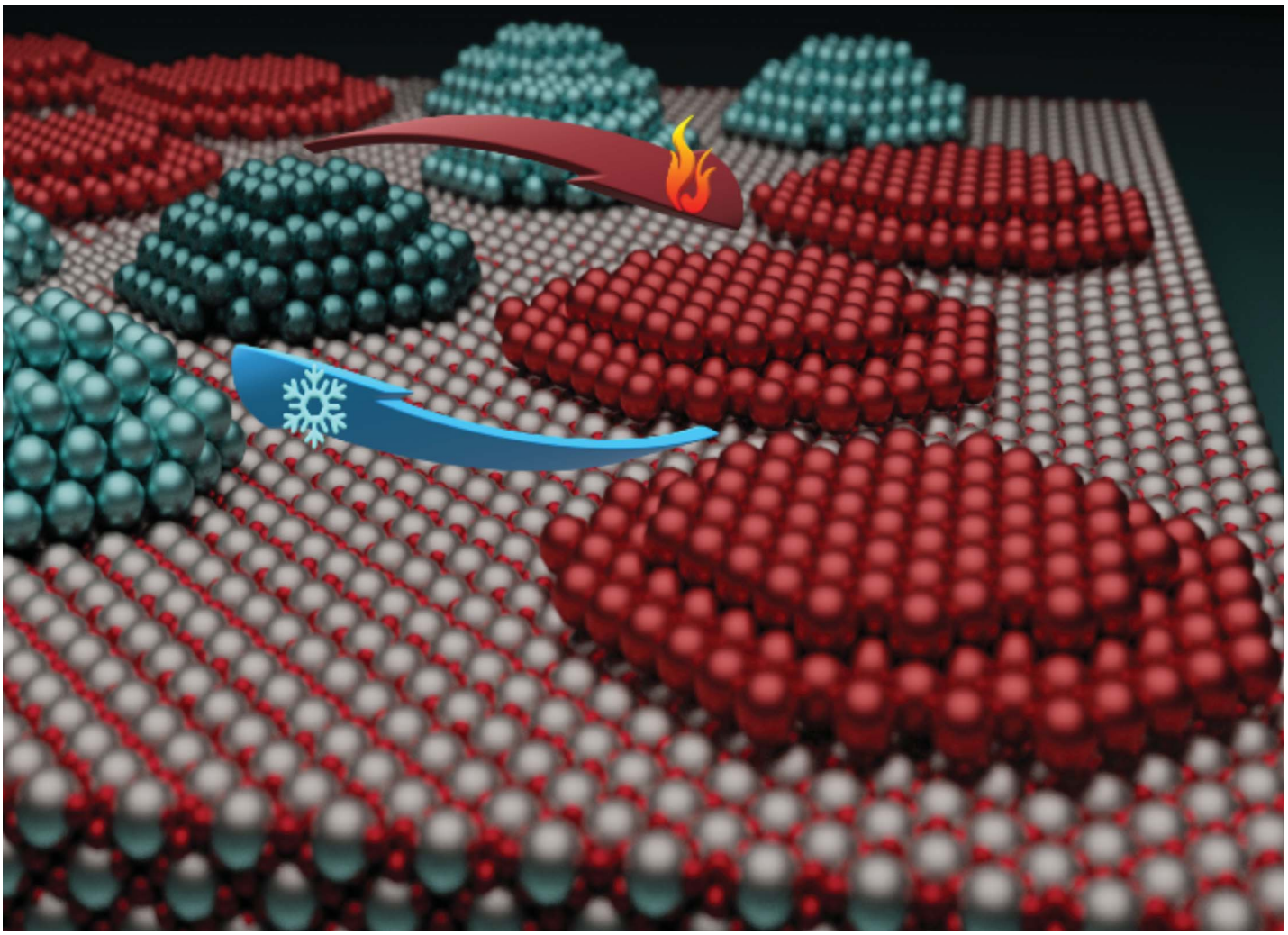

**Showcasing research from Professors Ayman M. Karim and Dionisios G. Vlachos's laboratories, School of Engineering and Applied Science, Department of Chemical Engineering, University of Virginia, and College of Engineering, Department of Chemical and Biomolecular Engineering, University of Delaware, USA.**

Reversible temperature-induced shape transition of Pt nanoparticles supported on $Al_2O_3$

Supported Pt nanoparticles are used in many industrial applications and their properties strongly depend on shape. Using in-situ spectroscopy and microscopy coupled with theoretical calculations, the shape of Pt nanoparticles supported on $Al_2O_3$ is shown to strongly depend on temperature. The nanoparticles adopt a hemispherical shape at low temperature and increasing temperature results in flattening and increased interface/interaction with the $Al_2O_3$ support leading to increased charge transfer.

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Image generated with Blender 5.1.0, and Blender add-on FCC model nanoparticle generator v1.3 (Ryo Mizuta Graphics).

## As featured in:


See Dionisios G. Vlachos, Ayman M. Karim *et al.,* *Nanoscale Adv.,* 2026, **8**, 504.

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