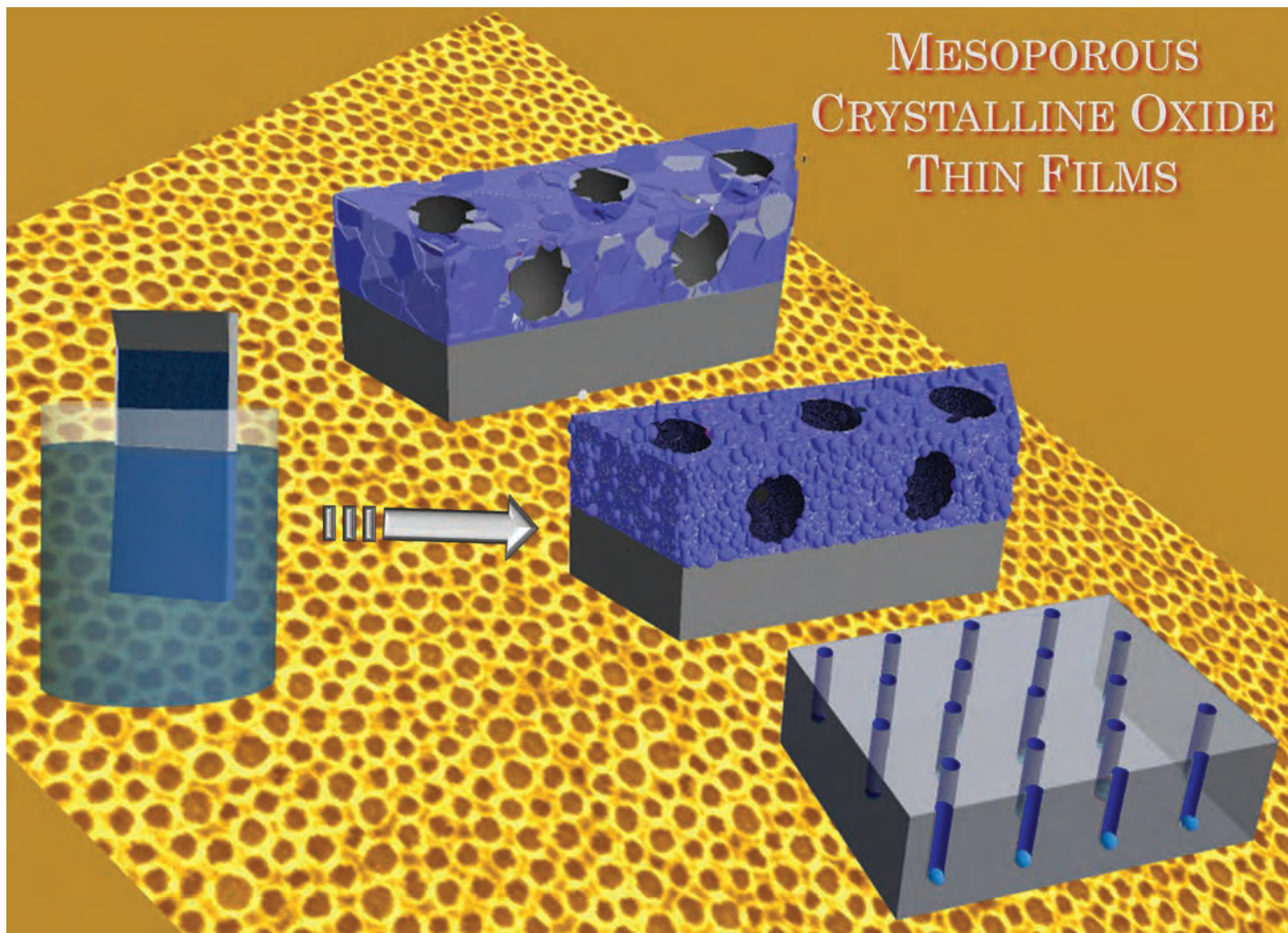


MESOPOROUS CRYSTALLINE OXIDE THIN FILMS

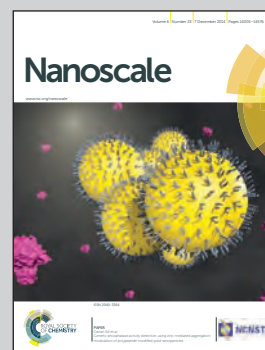


Showcasing research from the Collège de France in Paris and the Lyon Nanotechnology Institute in Lyon, France.

Mesoscopically structured nanocrystalline metal oxide thin films

Recently the first solution based synthesis of mesostructured quartz was reported, inspiring a review of mesoporous crystalline oxide thin films prepared *via* solution-deposition. Three main synthesis methods are presented and the physicochemical phenomena affecting crystallization and structure are discussed. Particular emphasis is placed on the directed epitaxial crystallization of both piezoelectric α -quartz films with complex morphology and single crystalline molecular sieve nanowires on silicon.

As featured in:



See Clement Sanchez *et al.*
Nanoscale, 2014, **6**, 14025.