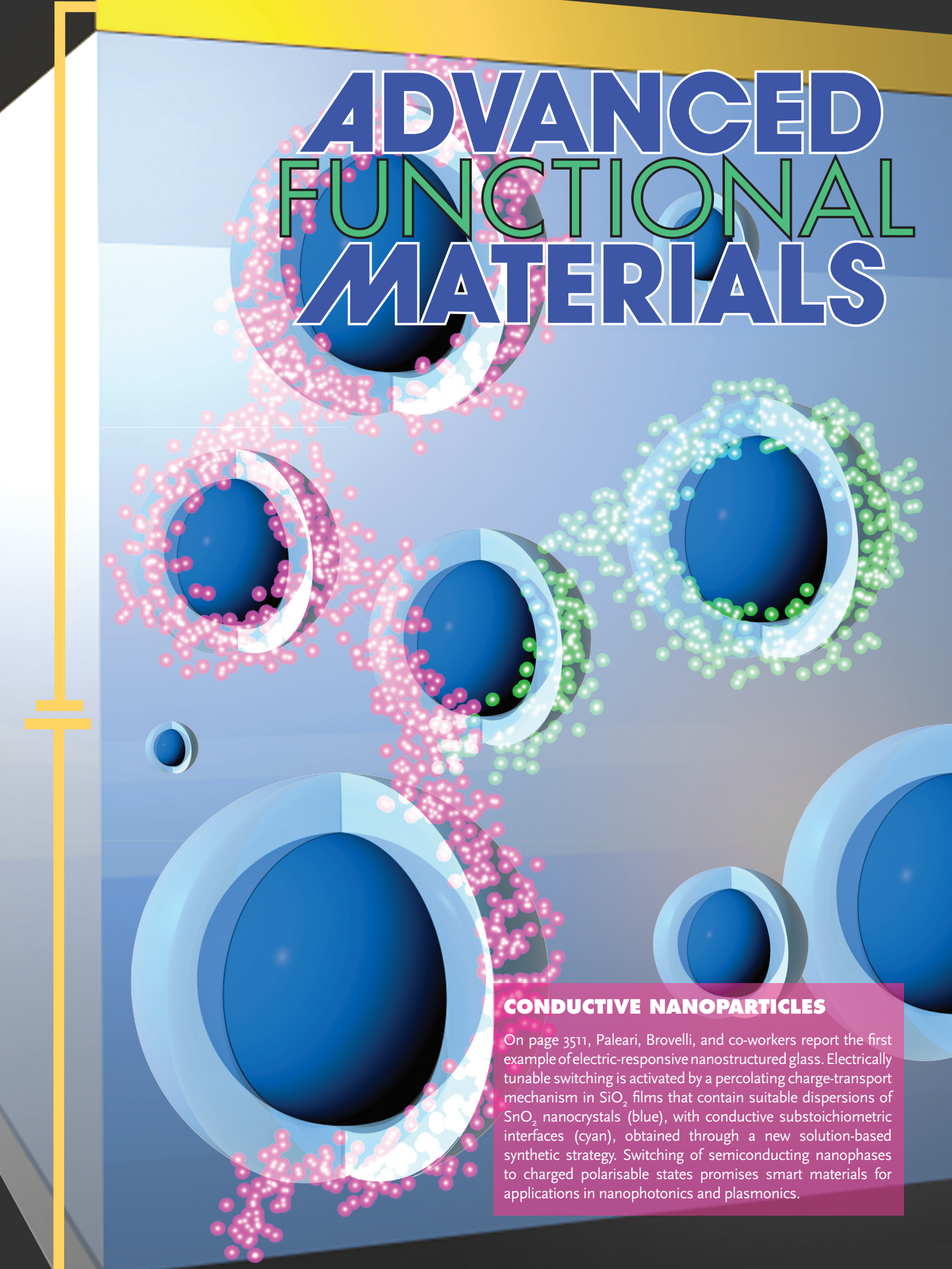


# ADVANCED FUNCTIONAL MATERIALS

An abstract illustration featuring several large, blue, spherical nanostructures with a lighter blue outer shell. These structures are surrounded by a dense cloud of small, pinkish-purple particles. A stream of these particles flows from the top left towards the bottom center. On the right side, there is a cluster of green particles. The background is a gradient of light blue and white, with a yellow vertical bar on the far left.

## CONDUCTIVE NANOPARTICLES

On page 3511, Paleari, Brovelli, and co-workers report the first example of electric-responsive nanostructured glass. Electrically tunable switching is activated by a percolating charge-transport mechanism in  $\text{SiO}_2$  films that contain suitable dispersions of  $\text{SnO}_2$  nanocrystals (blue), with conductive substoichiometric interfaces (cyan), obtained through a new solution-based synthetic strategy. Switching of semiconducting nanophases to charged polarisable states promises smart materials for applications in nanophotonics and plasmonics.