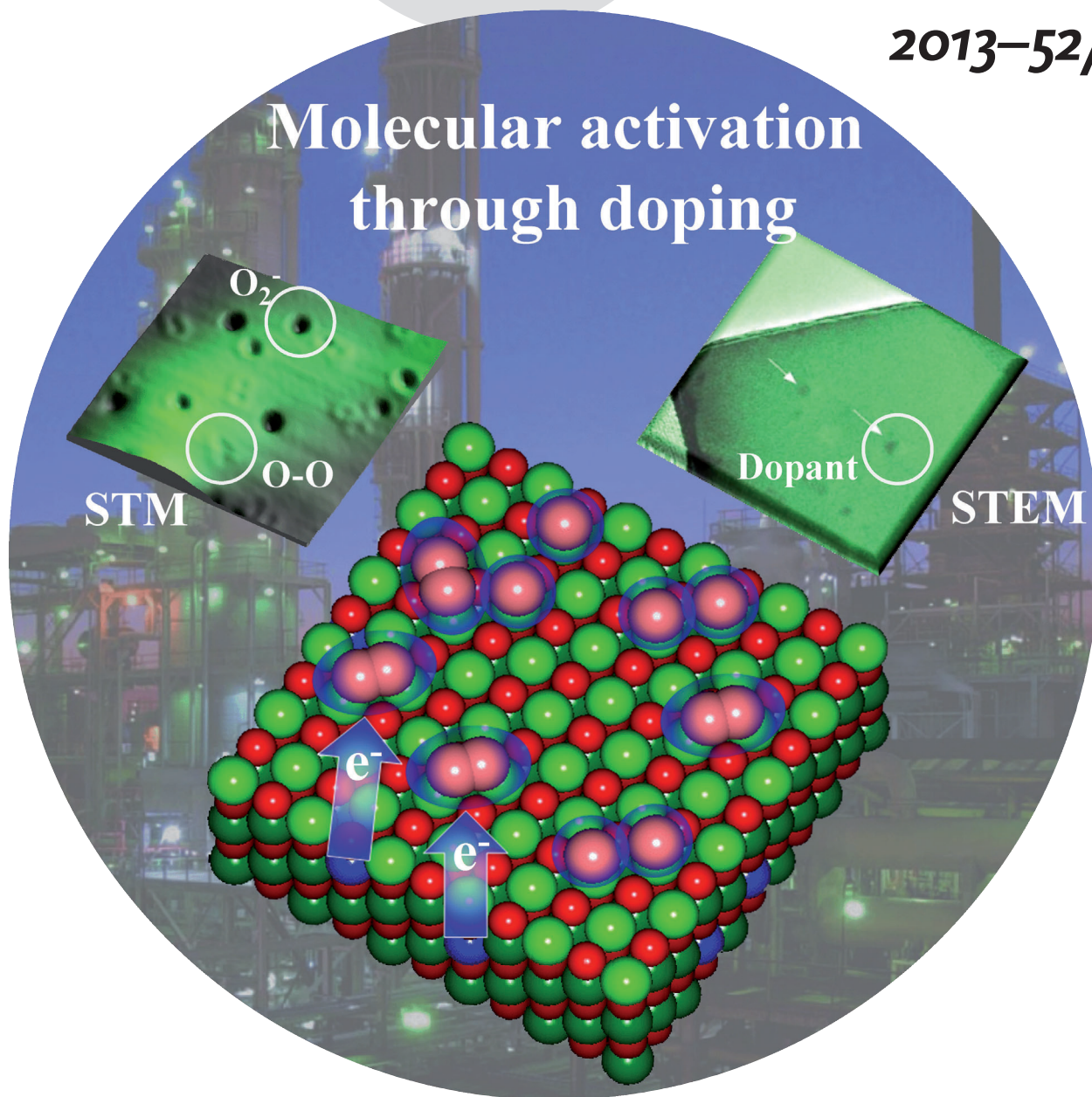


Molecular activation through doping



The activation of small molecules ...

... was thought to be impossible on defect-free wide-band-gap metal oxides owing to their chemical inertness. Based on microscopy and computational results, N. Nilius and co-workers report in their Communication on page 11385 ff. that O_2 adsorption on CaO doped with Mo ions leads to the formation of superoxo species with a high propensity for dissociation. Activation takes place through charge transfer from the donor-type Mo ions and proceeds even on ideal surfaces.