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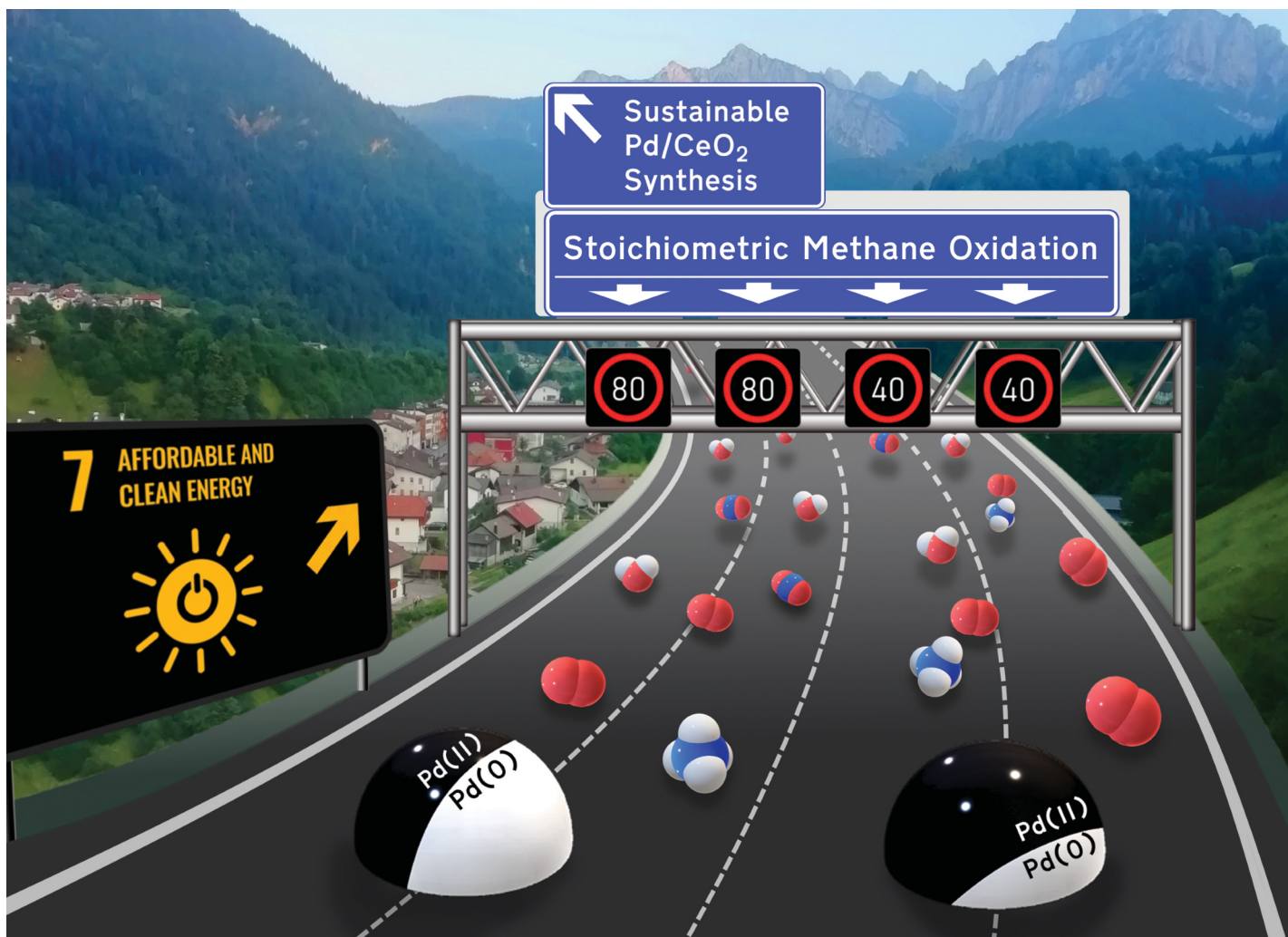


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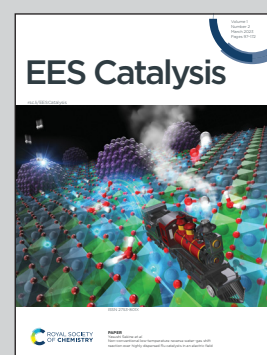


Showcasing research on palladium-ceria heterogeneous catalysts for environmental applications from Professor Alessandro Trovarelli's laboratory, Catalysis for Energy and Environment Group, Polytechnic Department, University of Udine, Italy.

In situ investigation of the mechanochemically promoted Pd-Ce interaction under stoichiometric methane oxidation conditions

Pd entities supported on ceria by a dry milling method maintain a peculiar configuration with a balanced ratio between reduced Pd^0 and oxidized Pd^{2+} species, leading to high turnover in CH_4 oxidation and improved resistance to steam deactivation even under low oxygen availability. The results were obtained combining innovative materials preparation and testing at the University of Udine with *in situ* analysis at the Universitat Politècnica de Catalunya and the Chemistry Division of Brookhaven National Laboratory. Image illustrated by Dr Maila Danielis.

As featured in:



See Alessandro Trovarelli *et al.*, *EES. Catal.*, 2023, 1, 144.