

Supporting Information

Reduced graphene oxide (RGO)-supported Pd-CeO₂ nanocomposite as a highly active electrocatalyst for facile formic acid oxidation

Y. Chandra Sekhar,^[1] P. Raghavendra,^[2] G. Thulasi Ramaiah,^[1] B. Sravani,^[1] P. Sri Chandana,^[3]
T. Maiyalagan,^[4] and L. Subramanyam Sarma^[1,*]

^[1]Nanoelectrochemistry Laboratory, Department of Chemistry, Yogi Vemana University, KADAPA – 516 005, Andhra Pradesh, INDIA.

^[2]Department of Chemistry, Rajiv Gandhi University of Knowledge Technologies (RGUKT)-AP, IIIT Campus, ONGOLE-516 216, Andhra Pradesh, INDIA.

^[3]Department of Civil and Environmental Engineering, Annamacharya Institute of Science & Technology, Utukuru (Post), C. K. Dinne (Mandal), KADAPA – 516 003, Andhra Pradesh, INDIA.

^[4]Department of Chemistry, SRM Institute of Science & Technology, Kattankulathur, CHENNAI – 603 203, Tamilnadu, INDIA.

Corresponding author:

Dr. L. Subramanyam Sarma (E-mail: sarma7@yogivemanauniversity.ac.in)

For elemental distribution of Pd-CeO₂/RGO nanocomposite, scanning electron microscopy – energy dispersive spectroscopy (SEM-EDS) measurements were performed using a JEOL IT500 scanning electron microscopy equipped with Ametek's EDAX detector. The data was presented as Figure S1 in the supporting information. As can be seen from SEM image, the catalyst particles are anchored on RGO sheet. The corresponding EDS elemental mapping confirmed the presence of Pd, Ce, O, and C elements.

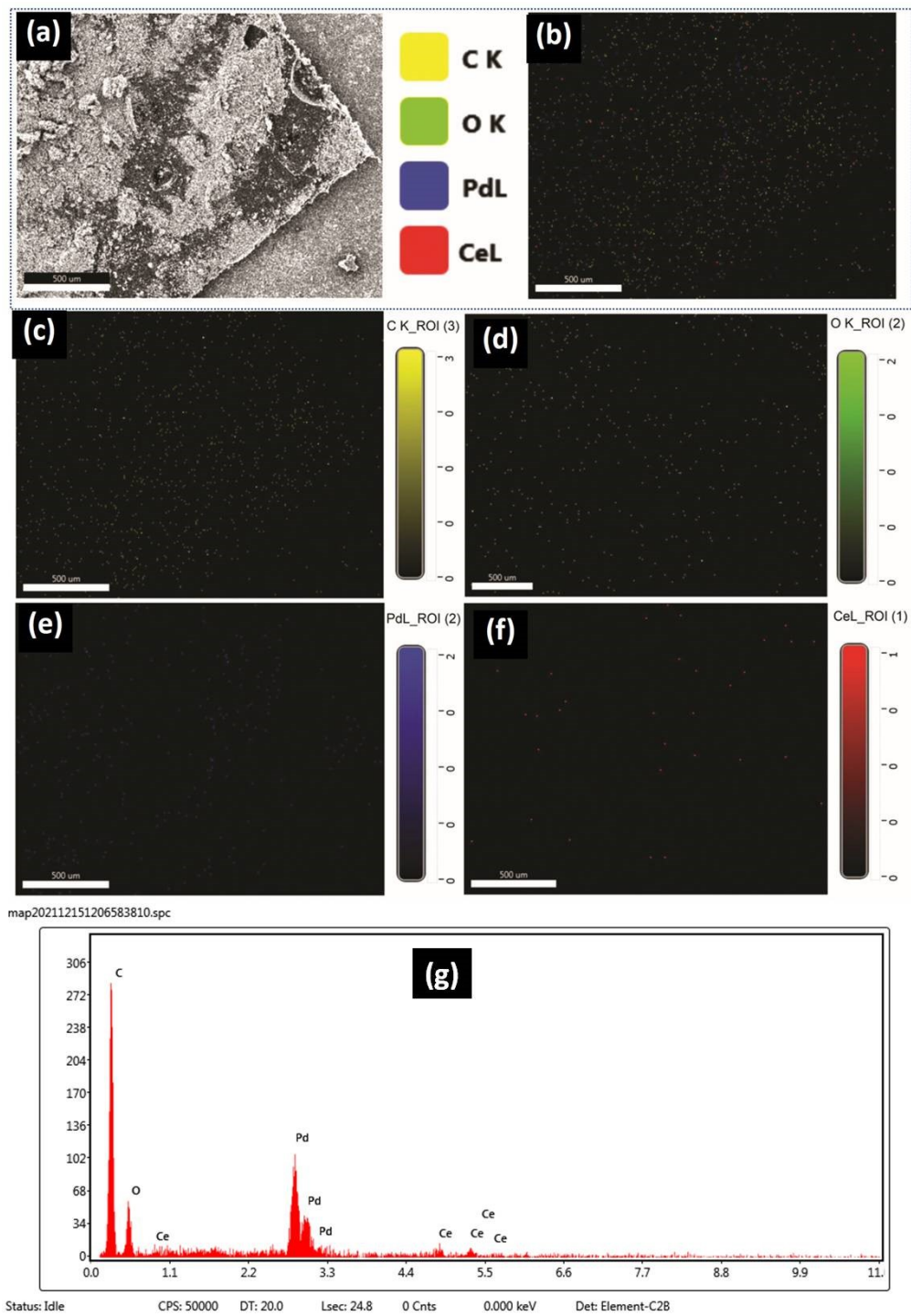


Figure S1. SEM image (a), elemental distribution (b) of Pd-CeO₂/RGO composite, corresponding elemental mapping of C (c), O (d), Pd (e), Ce (f) and EDS spectrum of Pd-CeO₂/RGO composite.

HRTEM images of Pd-CeO₂/RGO nanocomposite at two different resolutions (10 nm and 5 nm) as Figure S2 in the supporting information.

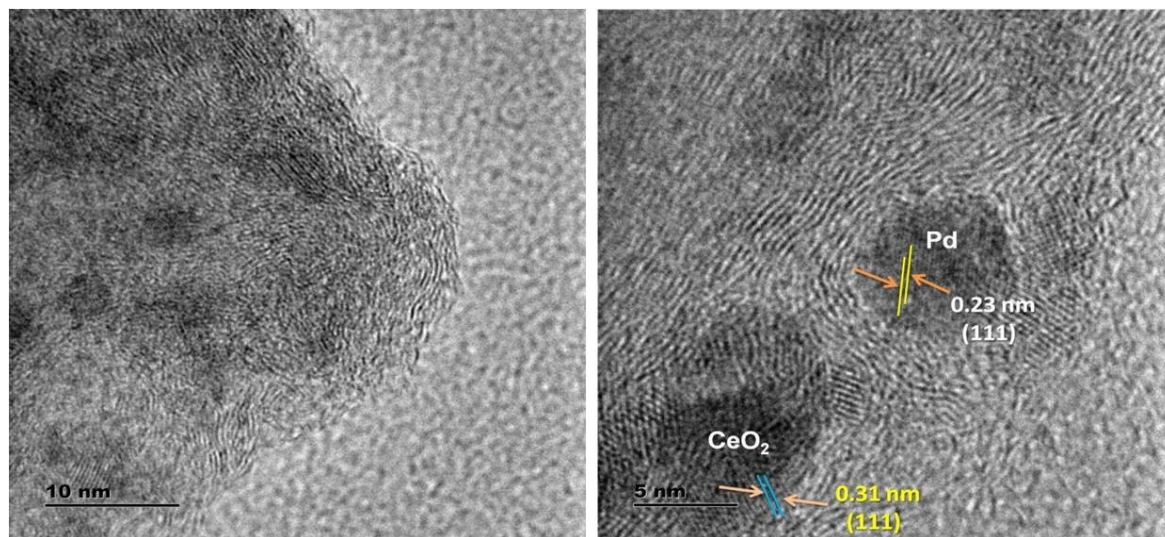


Figure S2. High resolution TEM (HRTEM) images of Pd-CeO₂/RGO nanocomposite.