

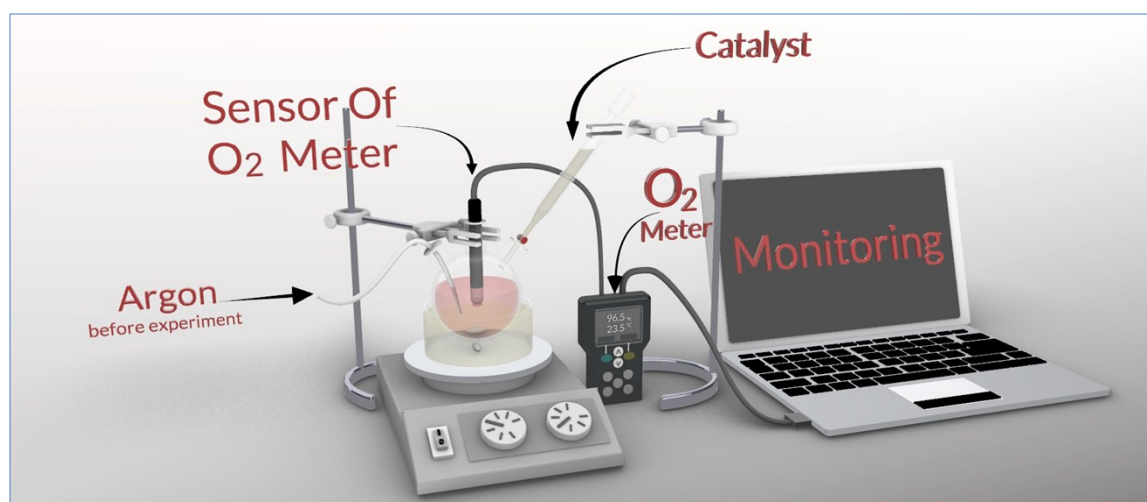
Electronic Supplementary Information

New findings and current controversies in the reaction of ruthenium red and ammonium cerium(IV) nitrate: Focus on the precipitated compound

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Scheme S1. Setup for oxygen-evolution experiment.

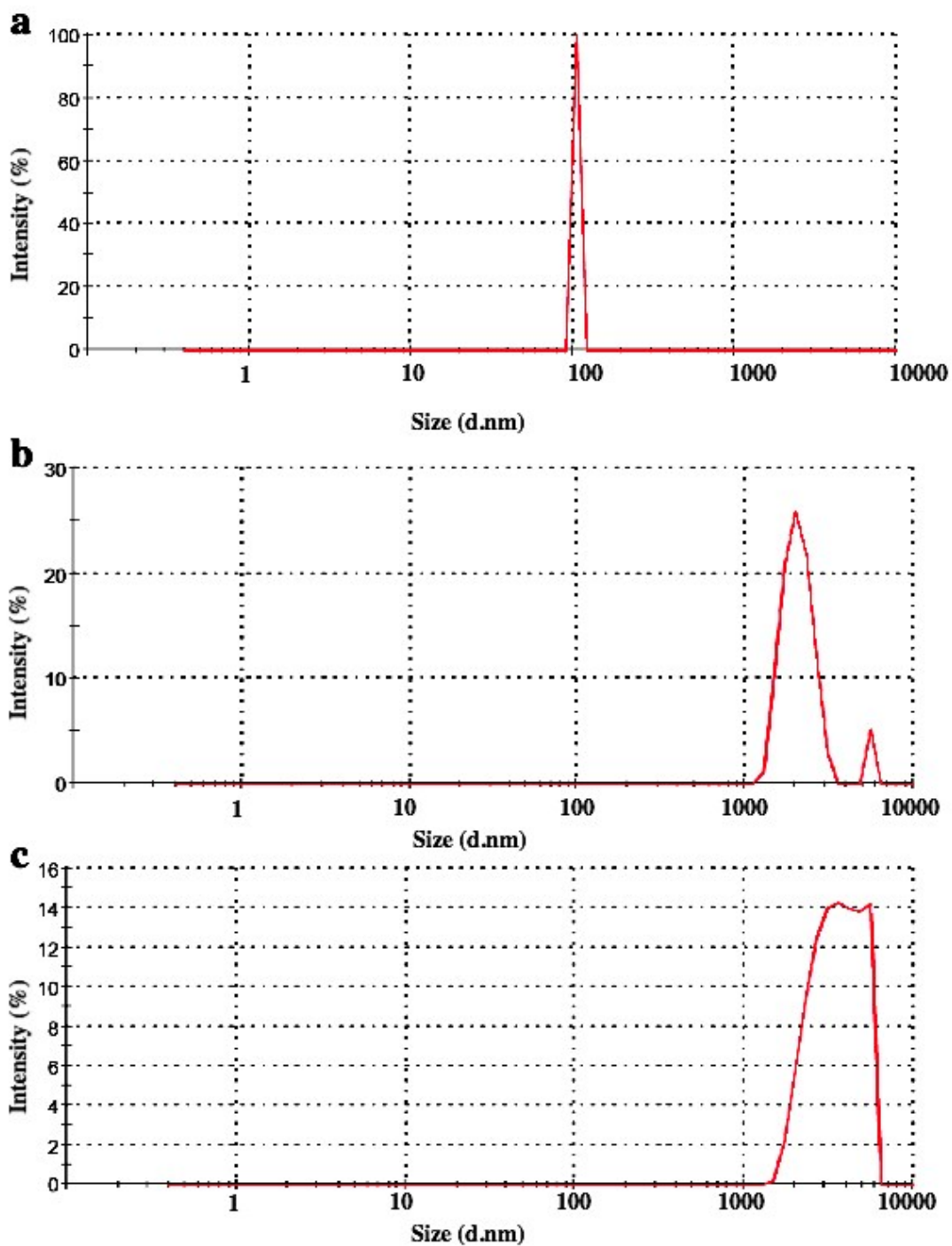


Figure S1. Dynamic light scattering (DLS) of the precipitate from the reaction of RuR and CAN: a) After one minute; b) After eight minutes; c) After twenty minutes.

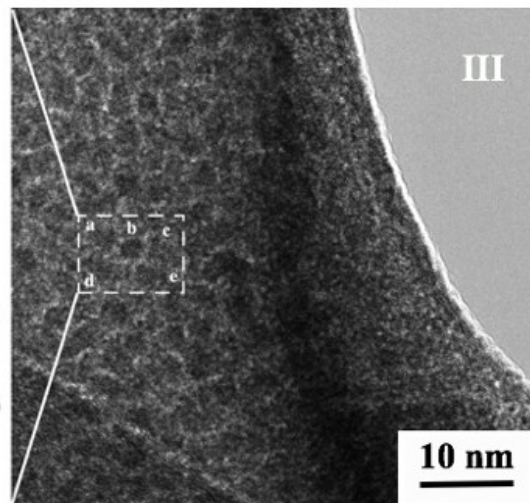
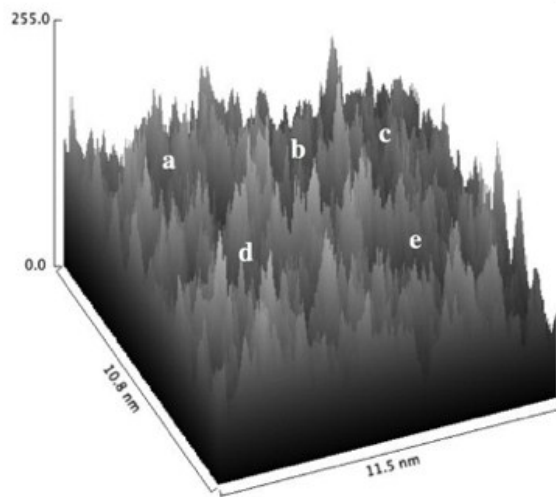
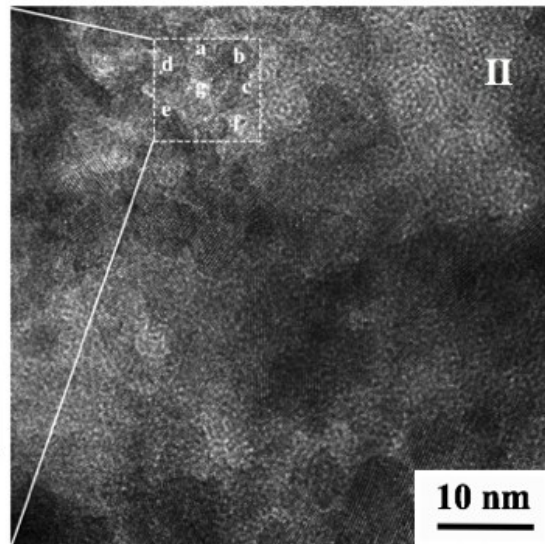
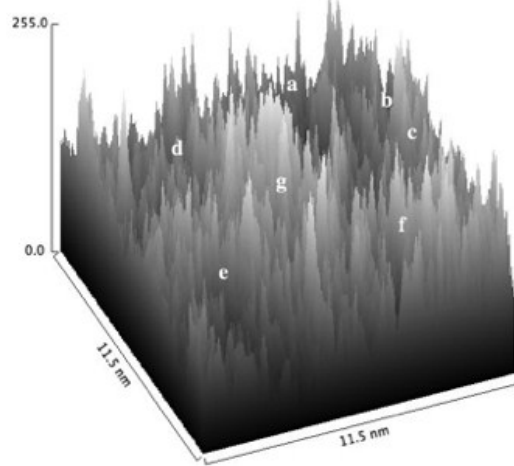
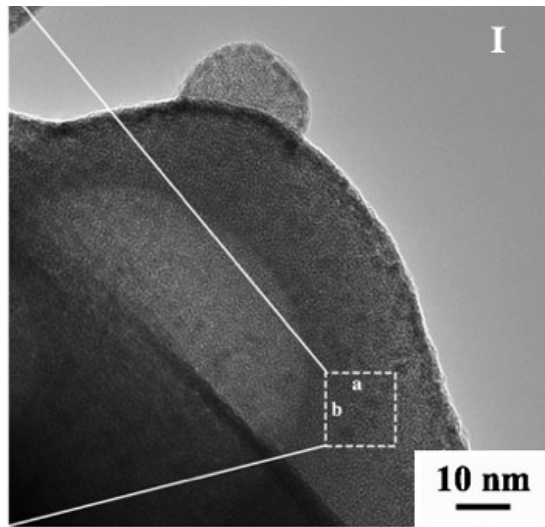
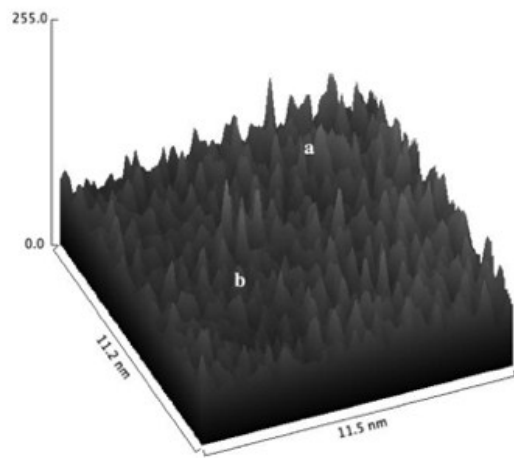


Figure S2. ImageJ surface plots of the selected areas of (I) RuR (II) obtained solid from the reaction RuR and CAN (III) the precipitate from the reaction of RuR and NH_4NO_3 revealing the nanoparticle distributions.

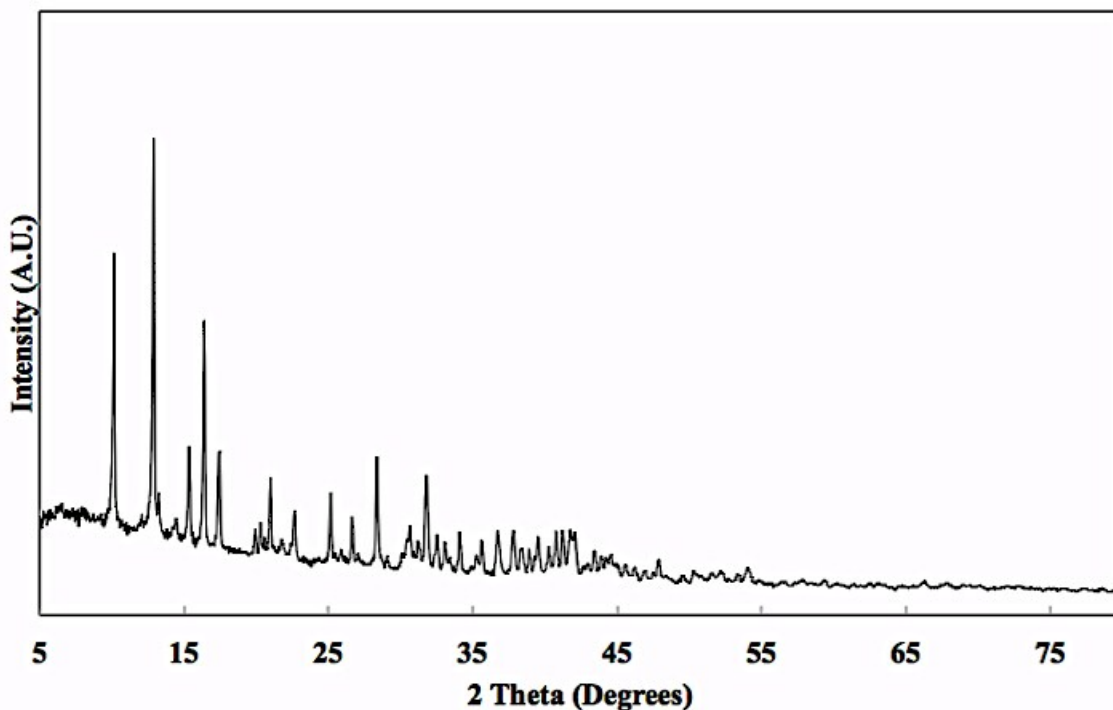


Figure S3. XRD pattern of the obtained solid from the reaction of RuR and CAN in the presence of excess CAN (The diffraction patterns of the product matched with JCPDS data card no. 98-009-6585 $[(\text{NH}_4)_2\text{Ce}(\text{NO}_3)_5(\text{H}_2\text{O})_2]$).

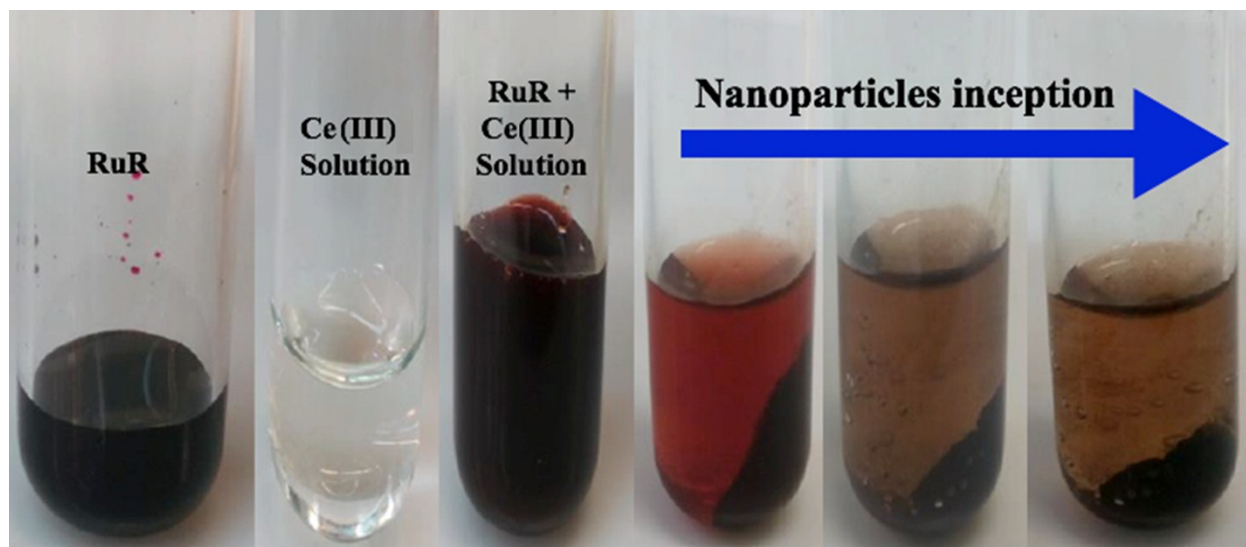


Figure S4. A solution of RuR in a reaction with $(\text{NH}_4)_2[\text{Ce}(\text{NO}_3)_5(\text{H}_2\text{O})_2]$ and subsequent nanoparticle inception.

Table S1. Elemental composition (%) of RuR versus the product that was obtained from its reaction with CAN.

Sample ID	Ru (%)	N (%)	O (%)	Cl (%)	Ce (%)
RuR*	9.30	54.4	11.2	25.0	-
RuR + CAN	11.8	50.4	14.6	22.1	0.97