

Supporting Information

Organic Nanostructures on Inorganic Ones: An Efficient Electrochromic Display by Design

Suryakant Mishra[§], Simran Lambora, Priyanka Yogi, Pankaj R. Sagdeo, and Rajesh Kumar*

*Material Research Laboratory, Discipline of Physics & MEMS, Indian Institute of Technology Indore,
Simrol-453552 India.*

**rajeshkumar@iiti.ac.in*

*[§]Current address: Department of Chemical and Biological Physics, Weizmann Institute of Science,
Rehovot 76100, Israel*

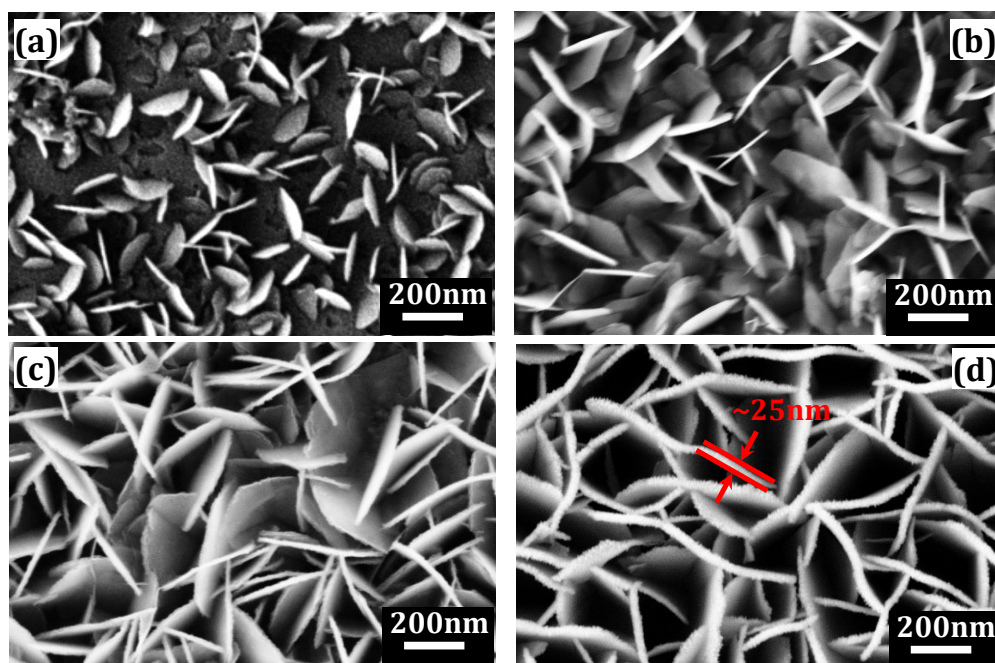


Figure S1: Surface morphologies of NiO nanopetals grown by hydrothermal process with deposition time of (a) 2 hrs. (b) 3 hrs. (c) 4 hrs. and (d) 5 hrs.

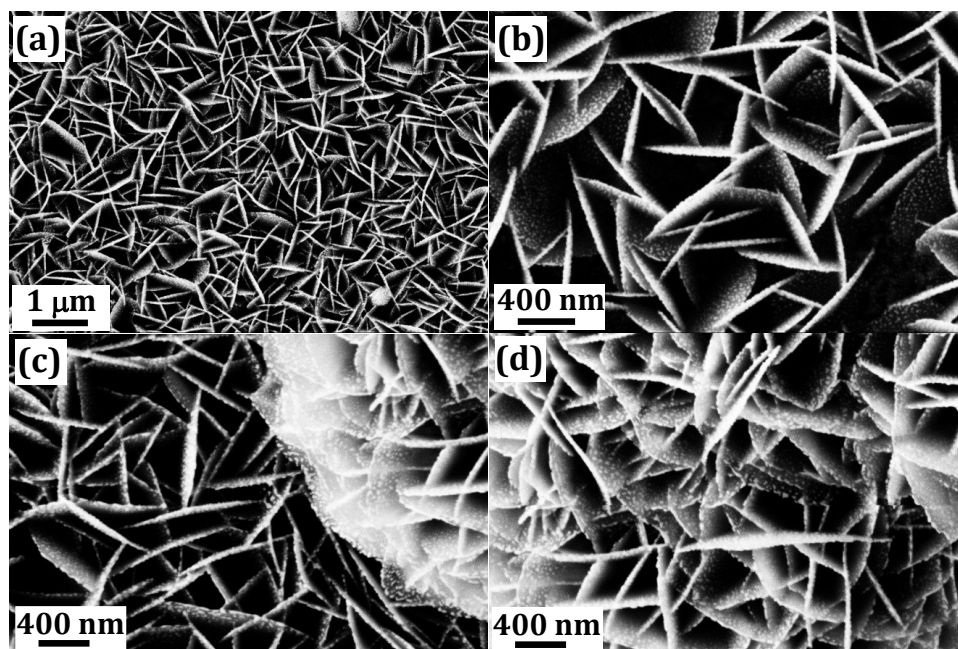


Figure S2: (a-d) Surface morphologies of PANI grown on NiO nanopetals during various pulse electrodeposition.

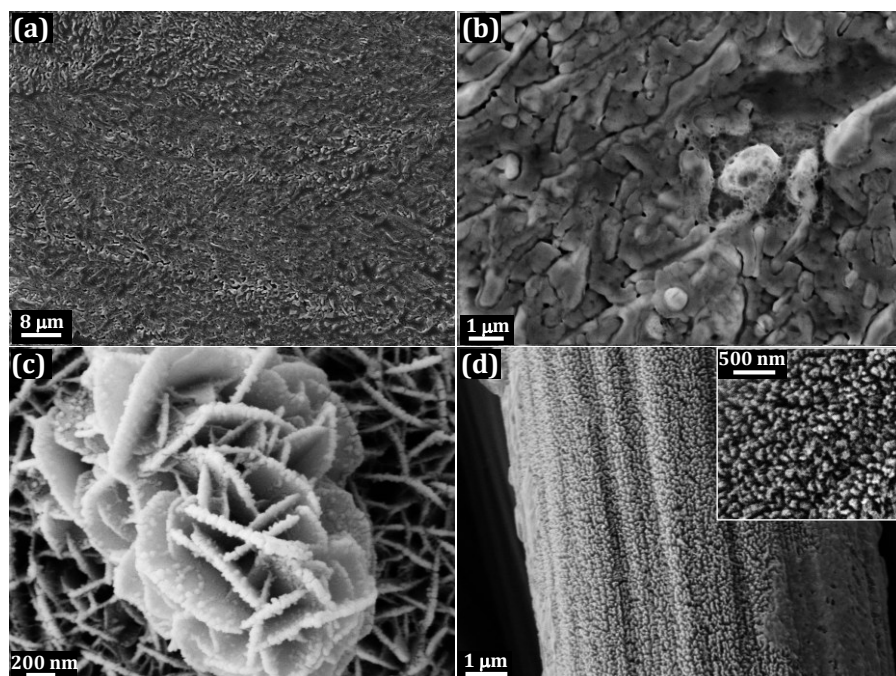


Figure S3: SEM images of the PANI film grown on various substrates (a, b) is on the FTO electrode (c) on the NiO nanopetals flower (d) on the carbon fiber.

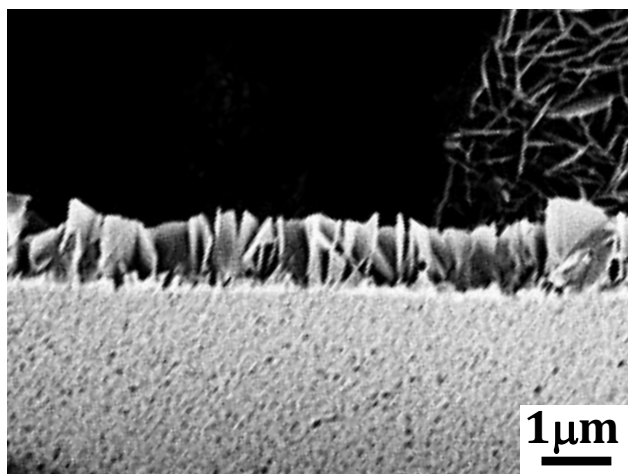


Figure S4: Cross-sectional SEM image of NiO-NPs

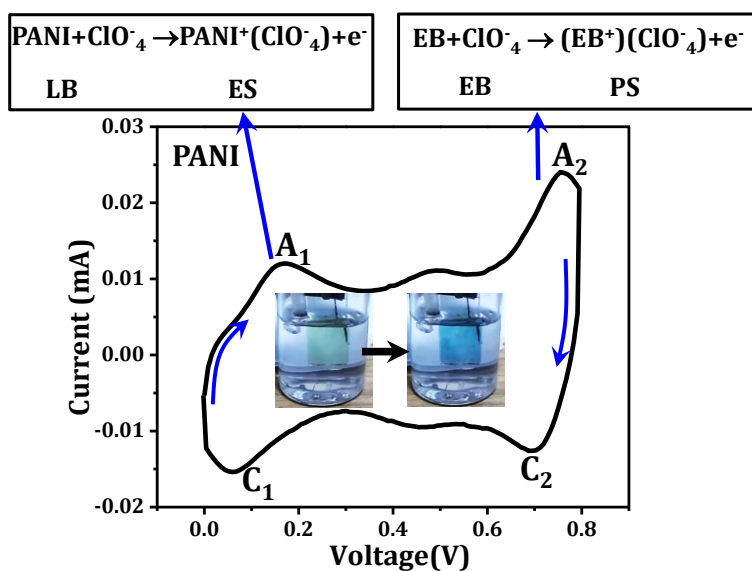


Figure S5: Shows reactions during the polymerization of polyaniline.

Device fabrication

Step 1: Clean by ultrasonication FTO electrode of size (2x1 cm²) patterned by double-sided tape.

Step 2: In this step, hydrothermal method is used to grow NiO-NSs of previous step fabricated electrode.

Step 3: Electrode of *step 2* is used for the electro-polymerization of aniline.

Step 4: Second layer of double-sided tape is peeled-off from the electrode fabricated in *step 3*.

Step 5: Finally second transparent electrode stack on the working electrode made in *step 4*.

Step 6: This is final step, which is about the operational state of the device.