

Complimentary effects of annealing temperature towards optimal tuning of functionalized Carbon-V₂O₅ hybrid nanobelts for targeted dual applications in electrochromic and supercapacitor devices

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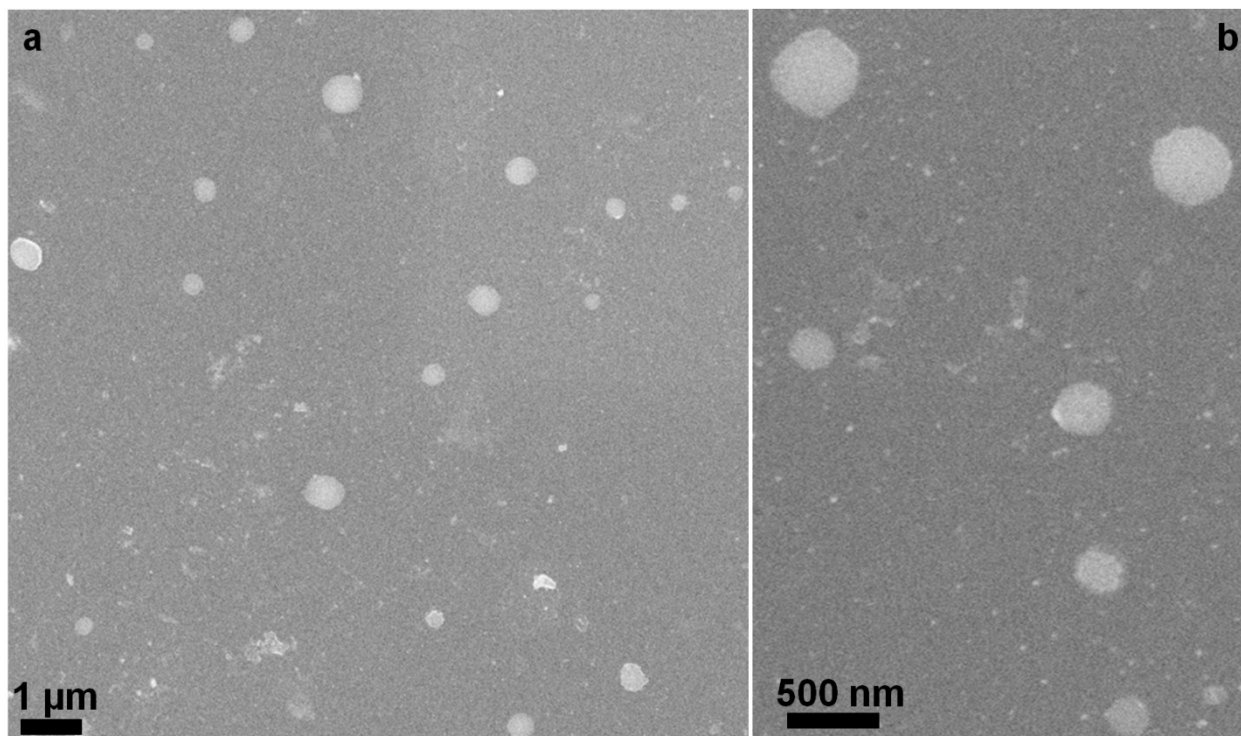


Figure S1: SEM images of C-dots.

Formation carbon nano-sphere under hydrothermal condition at a temperature of 140 °C for 5 h.

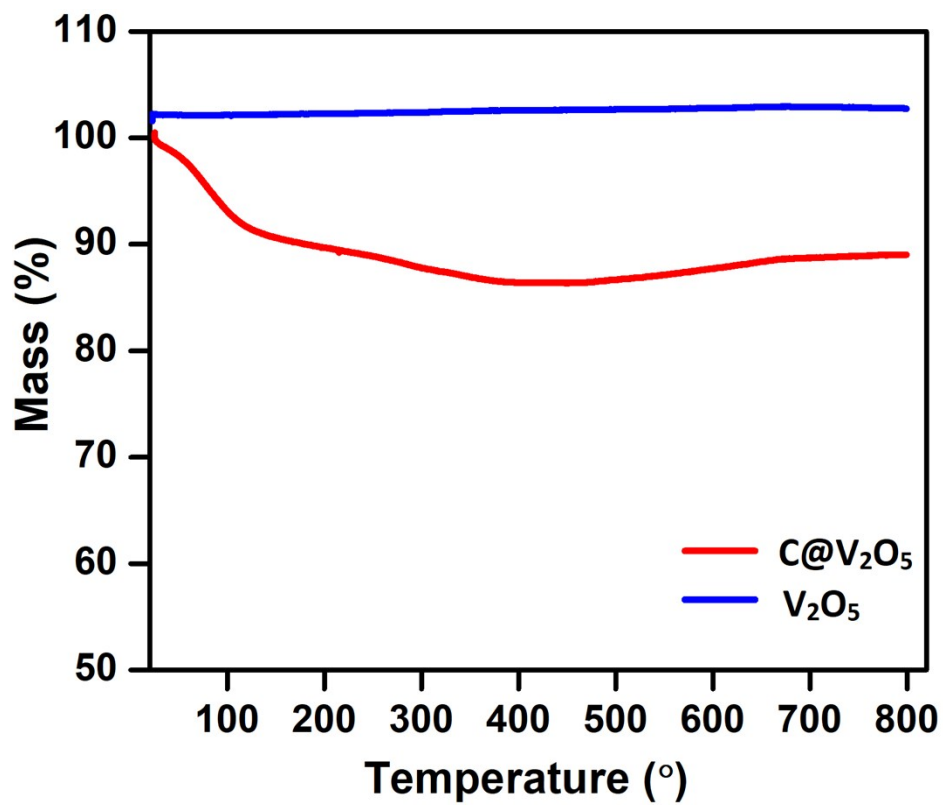


Figure S2: TGA curves of C@V₂O₅ and V₂O₅

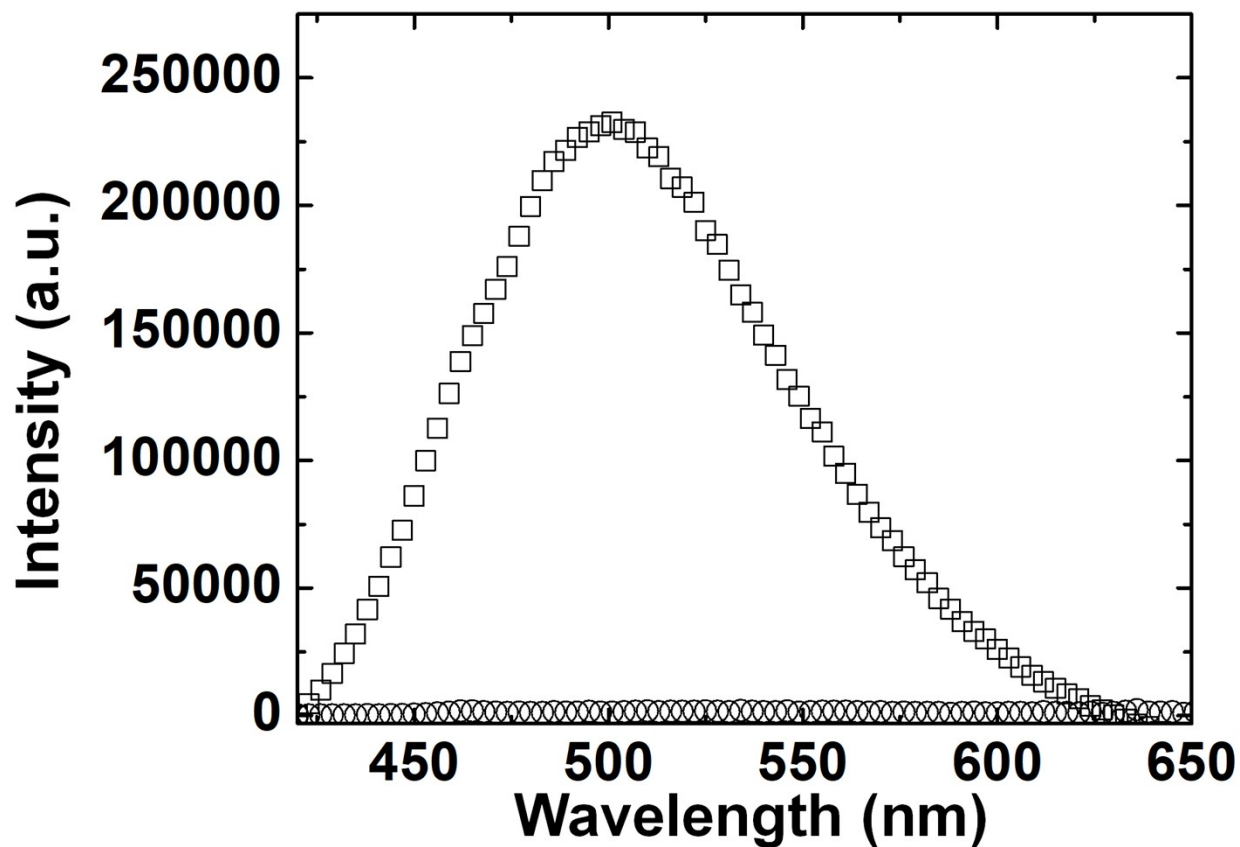


Figure S3: photoluminescence spectra of V_2O_5 nanorods (o) and $C@V_2O_5$ (□) at an excitation wavelength of 370 nm.

$C@V_2O_5$ shows a broad luminescent peak in the range of 420-600 nm whereas the one without C-dot doesn't show any characteristic emission peak, which apparently indicates that the luminescent characteristics arise from the presence of carbon nano-sphere.

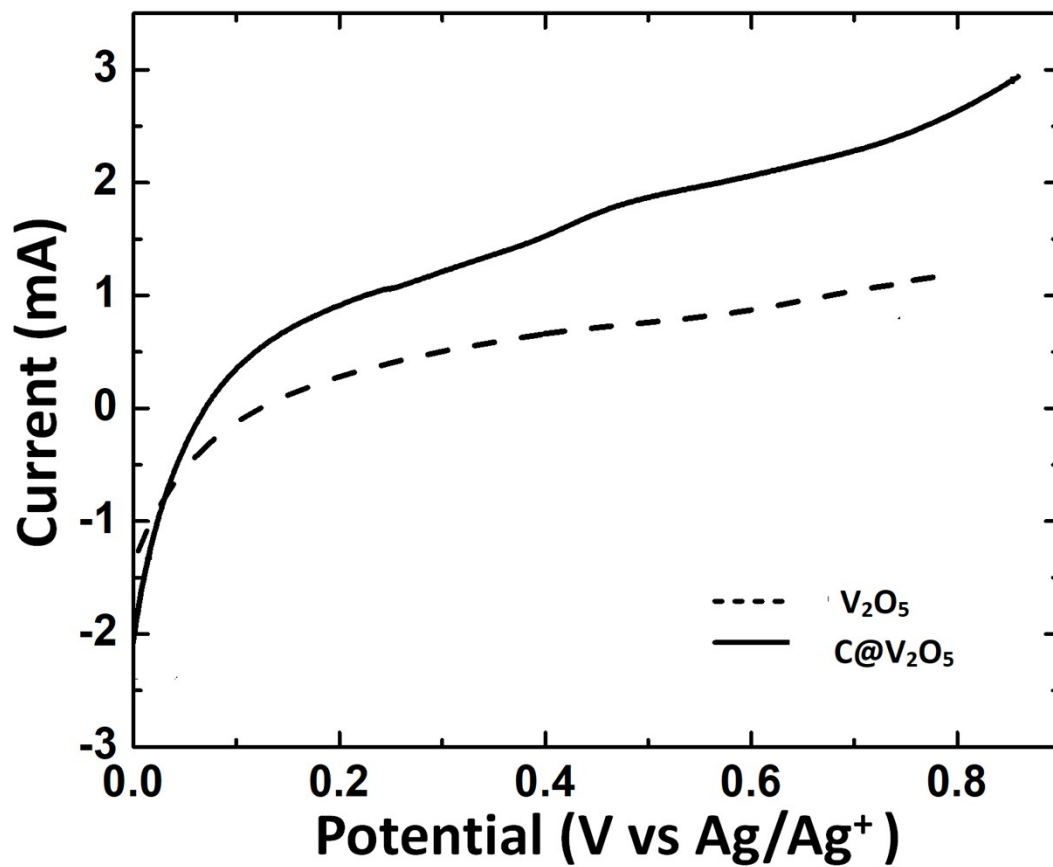


Figure S4: Linear sweep voltammetry of V₂O₅ and C@V₂O₅ by employing Pt wire as the counter electrode.

LSV clearly shows the higher value of current density values of C@V₂O₅ compared to pristine V₂O₅