

Selectively Recognizing Organic Semiconducting Molecules on Solid State Molecular Cages Based on ZnOTCPP

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Supporting Information

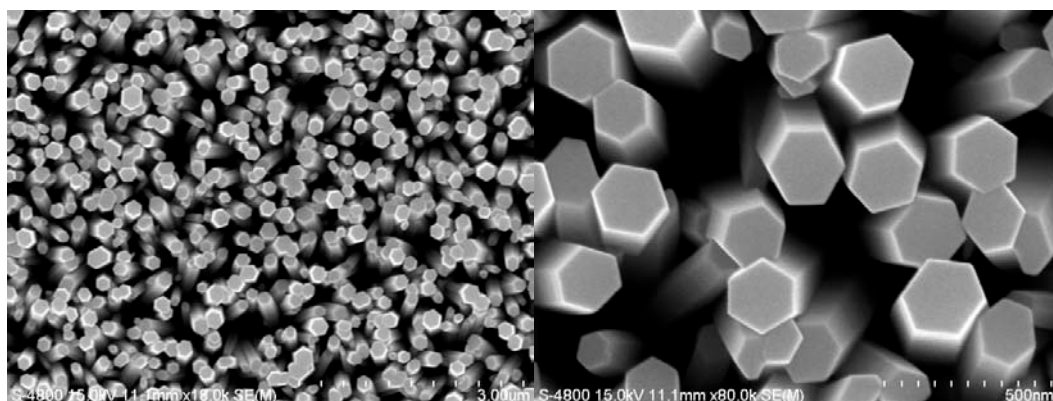


Figure S1. SEM images of (a) ZnO NR arrays and (b) ZnOTCPP.

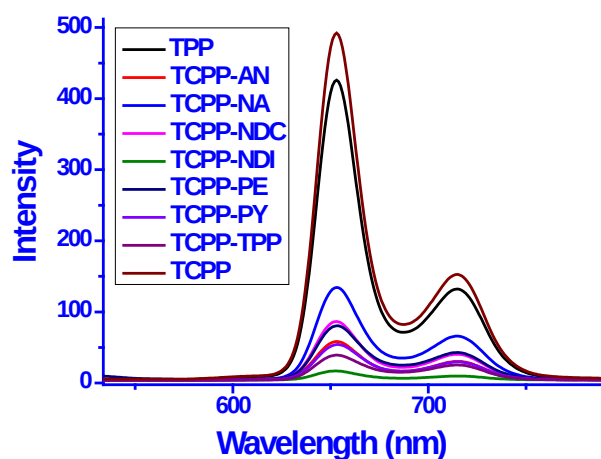


Figure S2. FL spectra of the solution mixed guest molecule [NA (ethanol), AN (ethanol), PY (ethanol), PE (ethanol), TPP (CH_2Cl_2), NDI (ethanol), or NDC (DMF); concentration: 1×10^{-5} M] and solution of TCPP (concentration: 1×10^{-5} M) in ethanol (TCPP:Guest=1:1), respectively, (λ_{ex} = 415 nm).

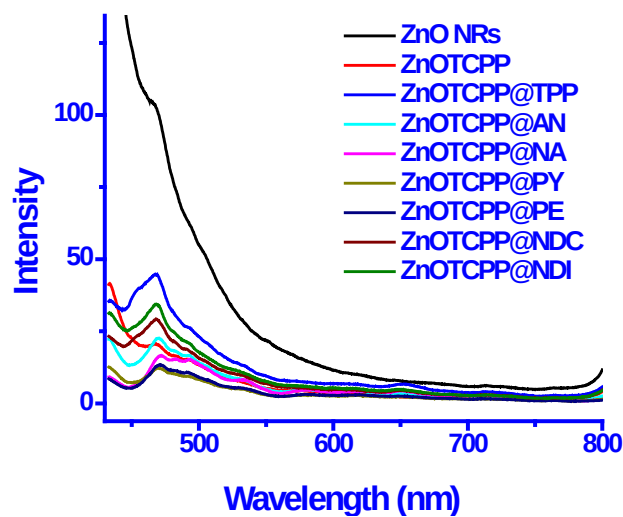


Figure S3. FL spectra of the molecular cage ZnOTCPP mixed with guest molecules; λ_{ex} = 415 nm.

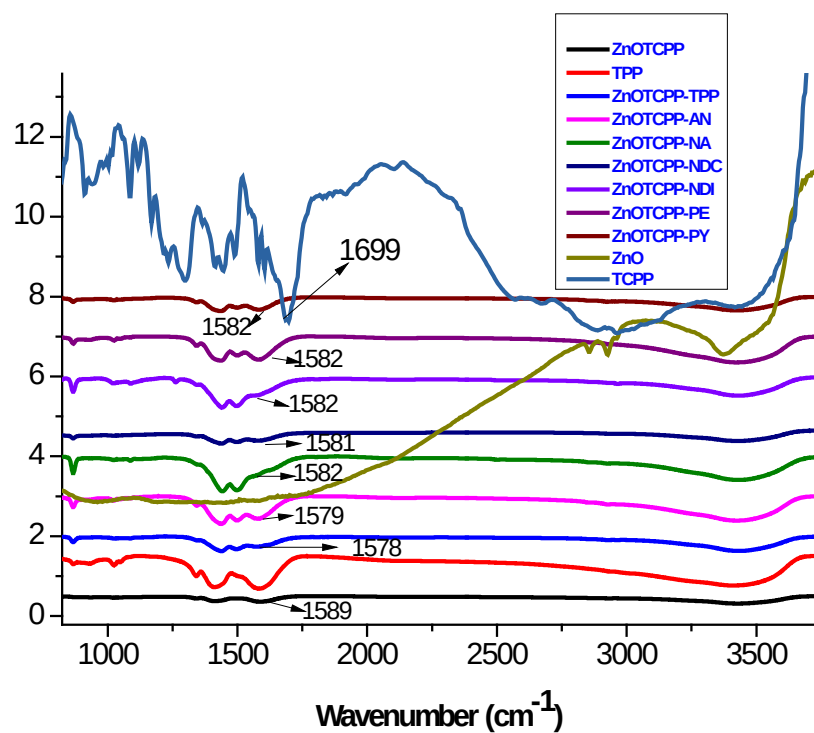


Figure S4. IR spectra of the ZnO NRs, TCPP, TPP, and the molecular cage ZnOTCPP, and the host/guest species ZnOTCPP@TPP, ZnOTCPP@AN, ZnOTCPP@NA, ZnOTCPP@PY, ZnOTCPP@PE, ZnOTCPP@NDC, and ZnOTCPP@NDI.

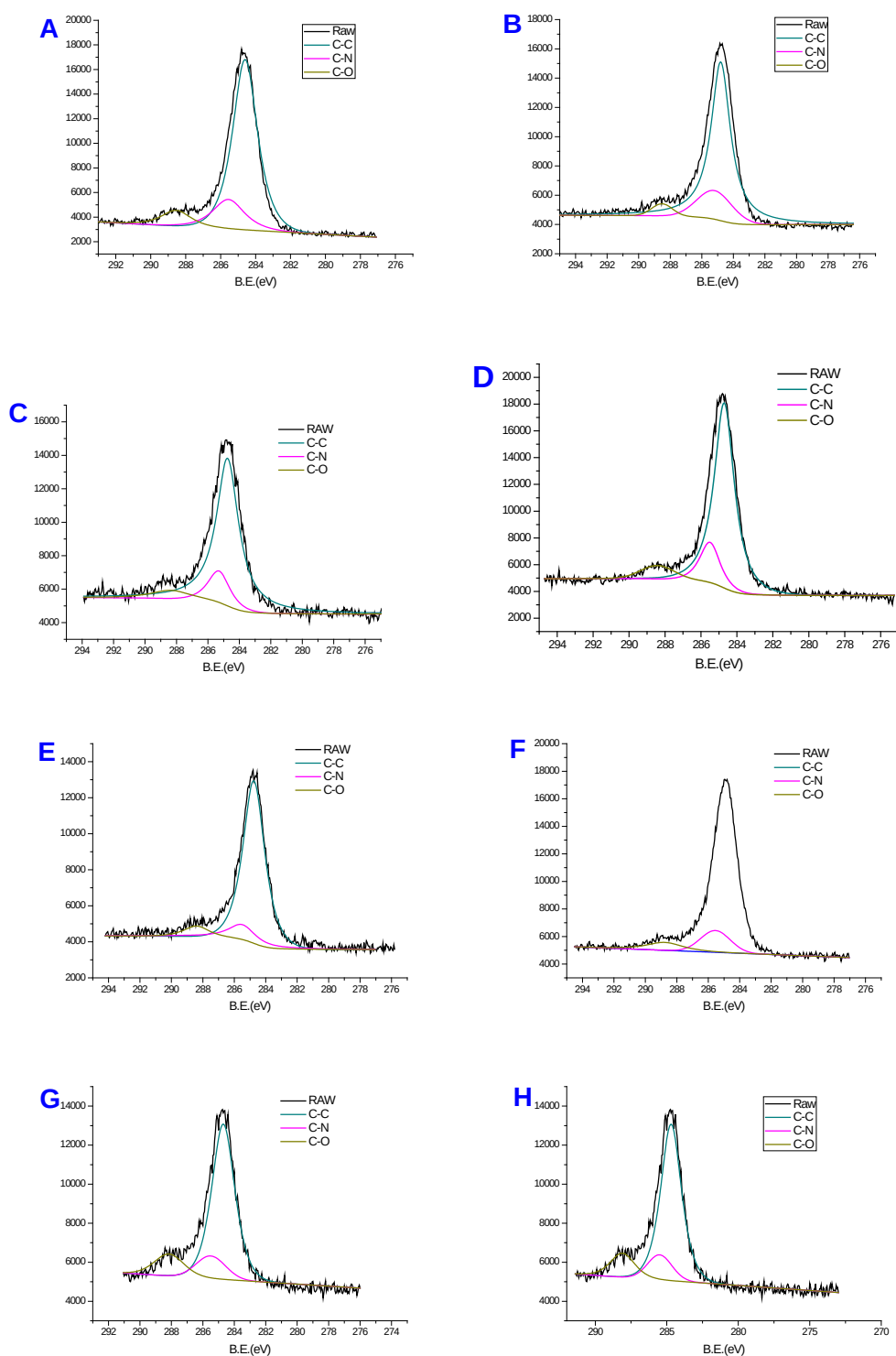


Figure S5. XPS spectra of (A) the molecular cage ZnOTCPP and (B–H) the ZnOTCPP@Guest species (B) ZnOTCPP@TPP, (C) ZnOTCPP@AN, (D) ZnOTCPP@NA, (E) ZnOTCPP@PY, (F) ZnOTCPP@PE, (G) ZnOTCPP@NDC, and (H) ZnOTCPP@NDI.

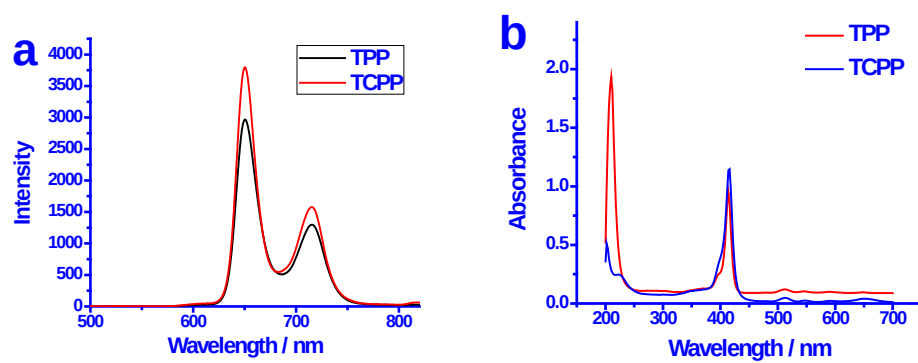


Figure S6. (a) FL ($\lambda_{\text{ex}} = 415$ nm) and (b) UV-Vis spectra of TCPP and TPP.