

Supplementary information

Synergy between plasmonic nanocavities and random lasing modes: A tool to dequench plasmon quenched fluorophore emission

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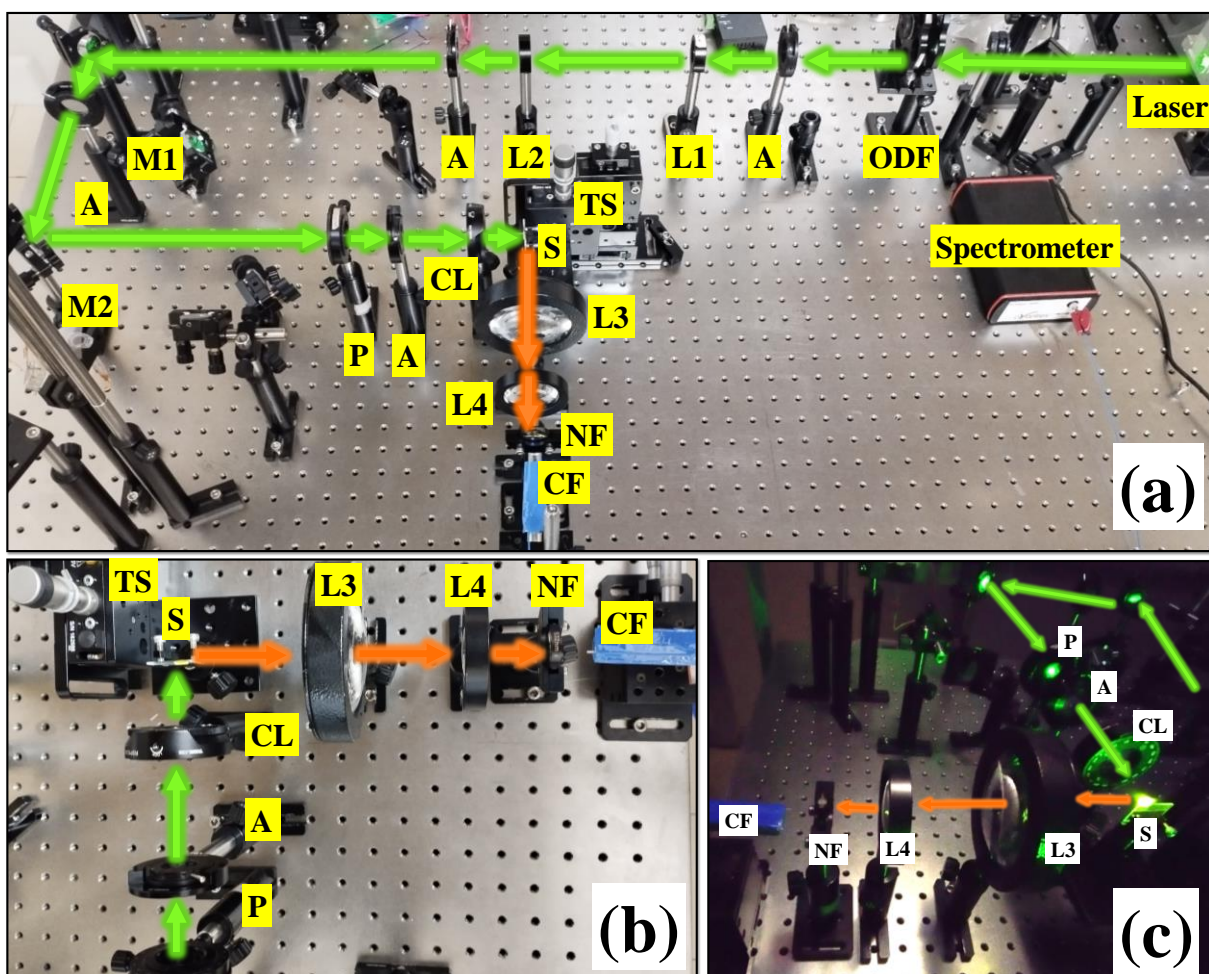


Figure S1. (a) Photograph of the experimental setup. (b) Photograph of top view of excitation and collection setup. (c) Photograph of the side view of excitation and collection setup. The optical elements mentioned in images are, ODF: optical density filter, A: aperture, L1 to L4: lens, M1, M2: mirror, P: polarizer, CL: cylindrical lens, S: sample, TS: translation stage, NF: notch filter, CF: collection fiber. The green and orange arrows are a guide to the eye indicating the direction of pump beam and emitted light, respectively.

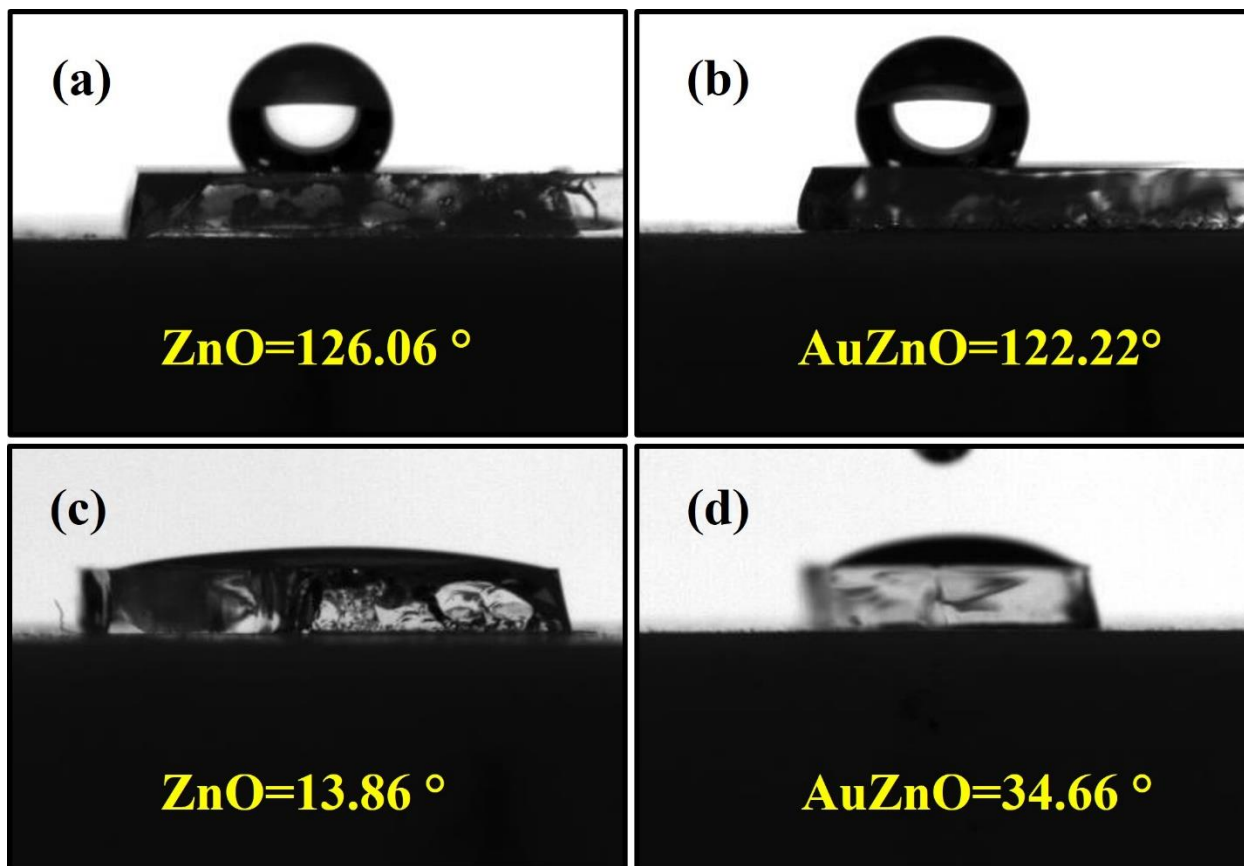


Figure S2. The contact angle measurements before plasma treatment for (a) ZnO and (b) AuZnO. The contact angle measurements after the plasma treatment for (c) ZnO and (d) AuZnO.

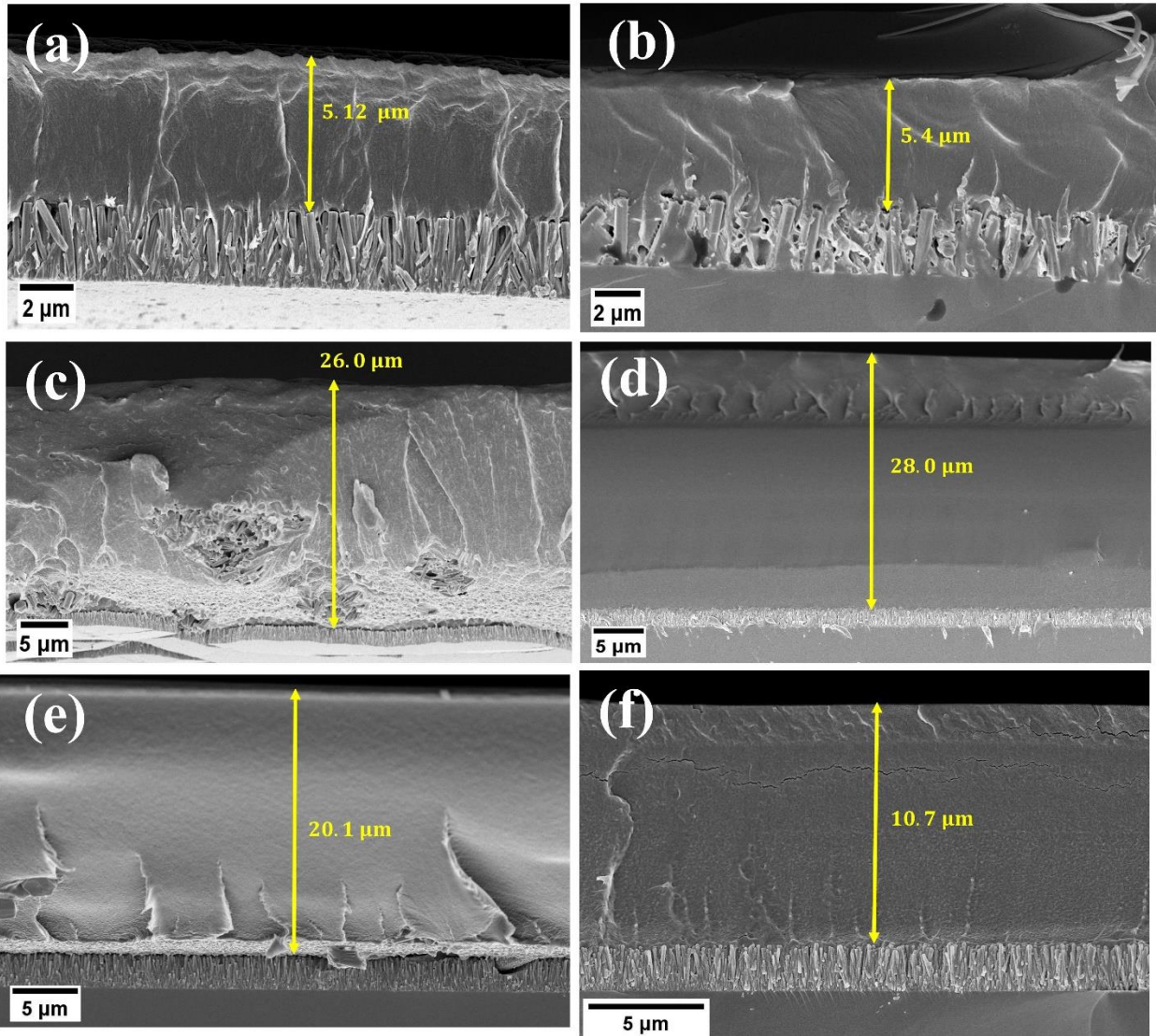


Figure S3. SEM images of the cross-sectional view of (a) Pyrromethene PMMA doped ZnO, (b) Pyrromethene PMMA doped AuZnO, (c) DCM PVA doped ZnO, (d) DCM PVA doped AuZnO, (e) Nile red PVA doped ZnO, and (f) Nile red PVA doped AuZnO.

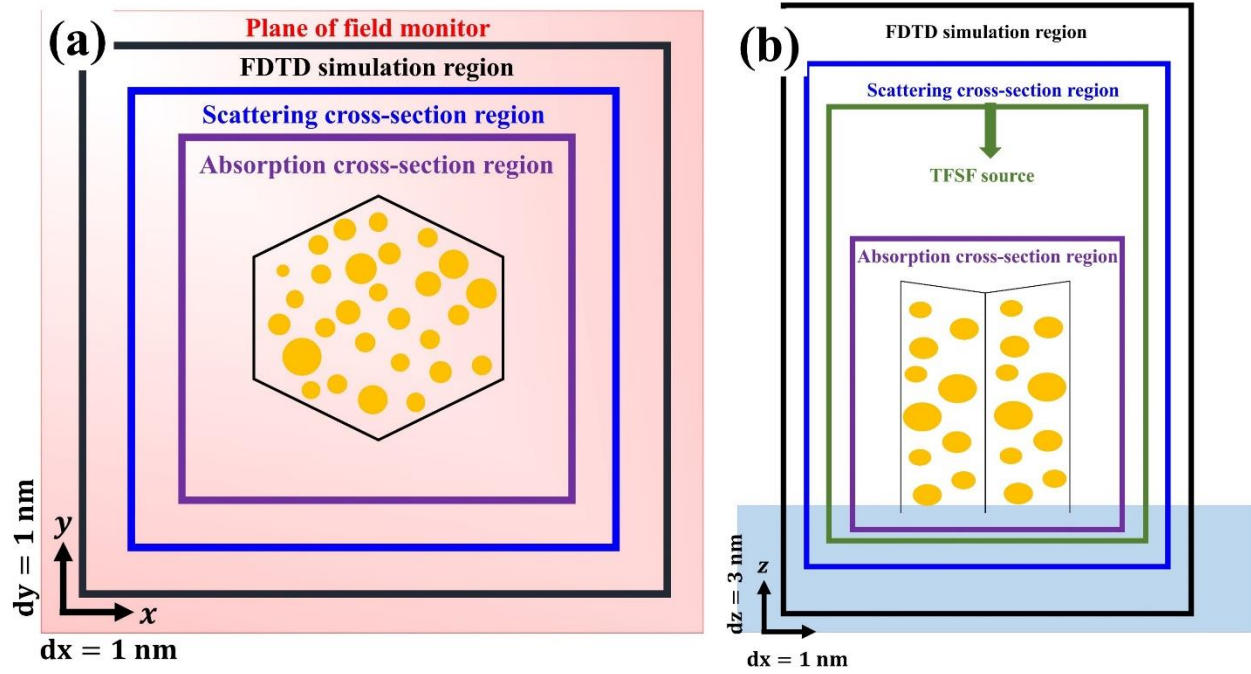


Figure S4. (a) Top and (b) cross-sectional view of the simulation setup.