Electronic Supplementary Material (ESI) for RSC Advances.

Supporting information

Fabrication of inverse opal structure of hybrid metal–conducting polymer for plasmon-induced hyperthermia applications.

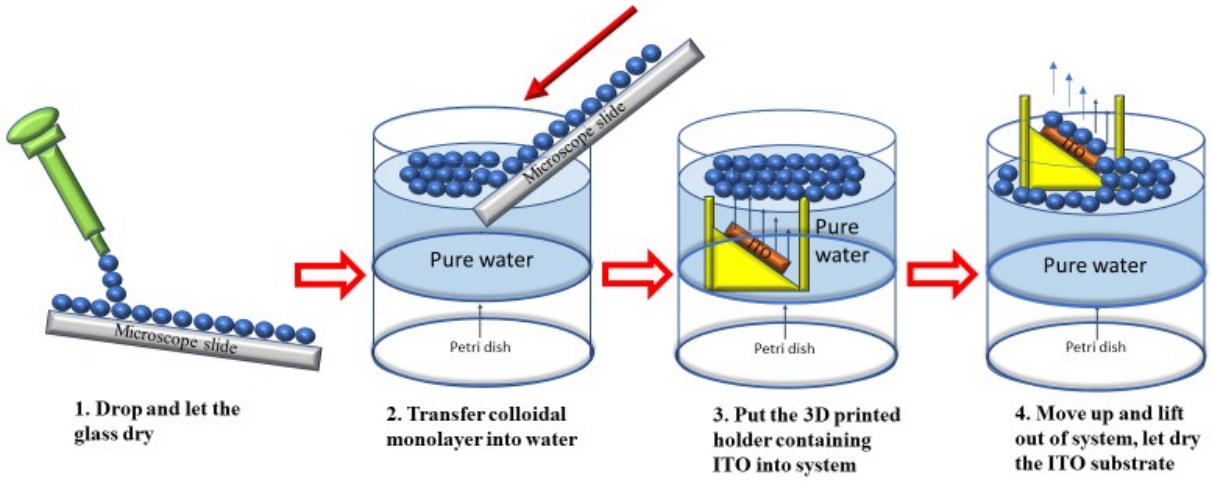
Quang-Hai Le[1], Thu-Uyen Tran[1], Van-Tuan Dinh[2], Hoai-Nam Nguyen[3]; Hong-Nam Pham[3]; Xuan-Truong Nguyen[3] ; Luong-Lam Nguyen[1]; Thi-Mai-Thanh Dinh[1]; Van-Quynh Nguyen[1*]

[1]*University of Science and Technology of Hanoi (USTH) – Vietnam Academy Science and Technology – 18 Hoang Quoc Viet – Cau Giay – Hanoi;*

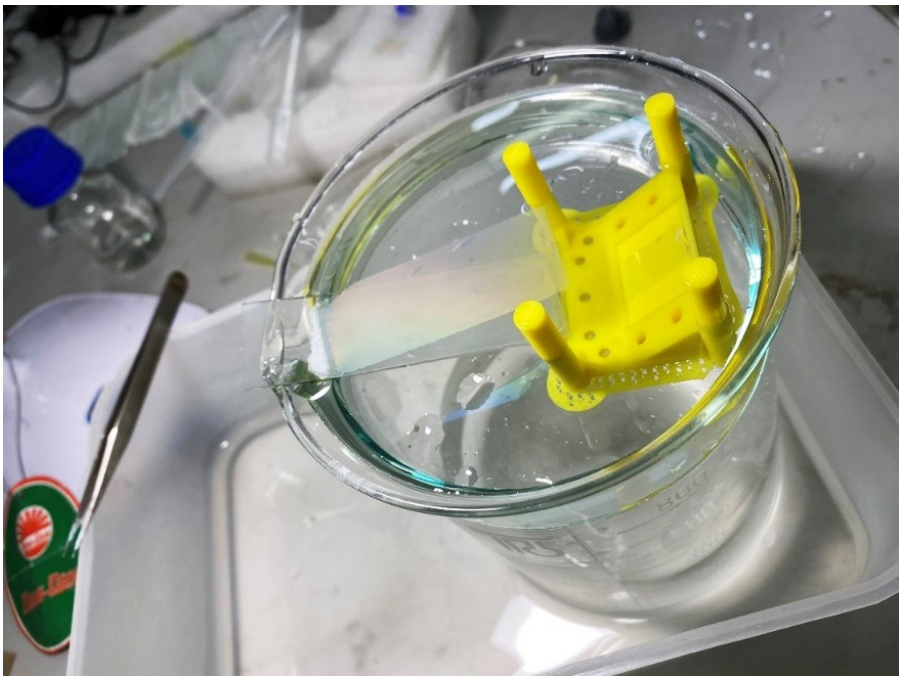
[2]*Electric Power University, 235 Hoang Quoc Viet – Bac Tu Liem – Hanoi.*

[3]*Institute of Material Sciences (IMS)– Vietnam Academy Science and Technology – 18 Hoang Quoc Viet – Cau Giay – Hanoi;*

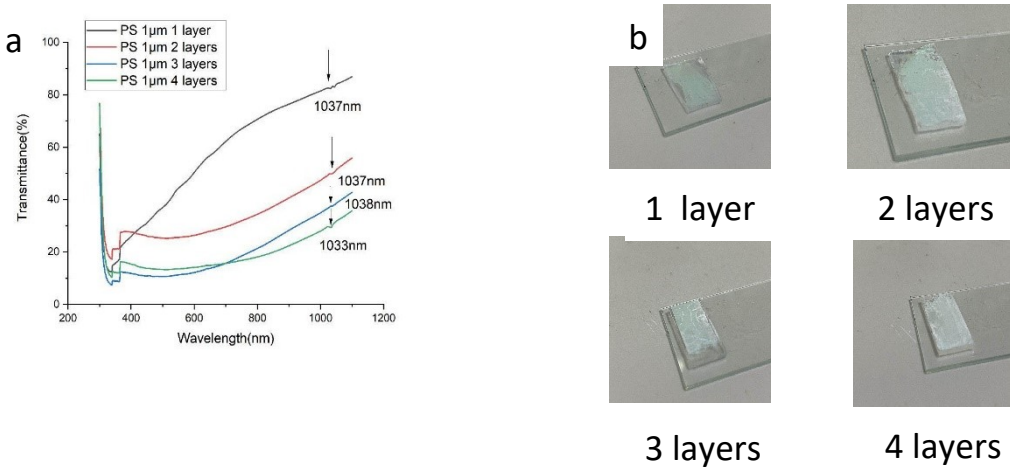
*Corresponding author : nguyen-van.quynh@usth.edu.vn



Figue SI 1. Scheme of the interface-coating deposition process



Figue SI 2. The 500 nm PS spheres were transferred from the glass slide onto the water without using the surfactant.



Figue SI 3. a) The transmittance spectra of PS 1 μm opaline structure by UV-VIS characterization. b) The digital pictures of samples

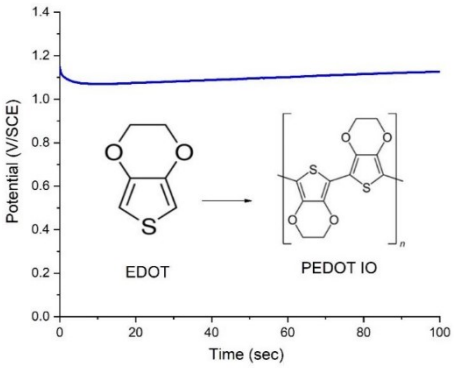


Figure SI 4 Electropolymerization of PEDOT inverse opal on ITO electrode surface by cyclic chronopotentiometry

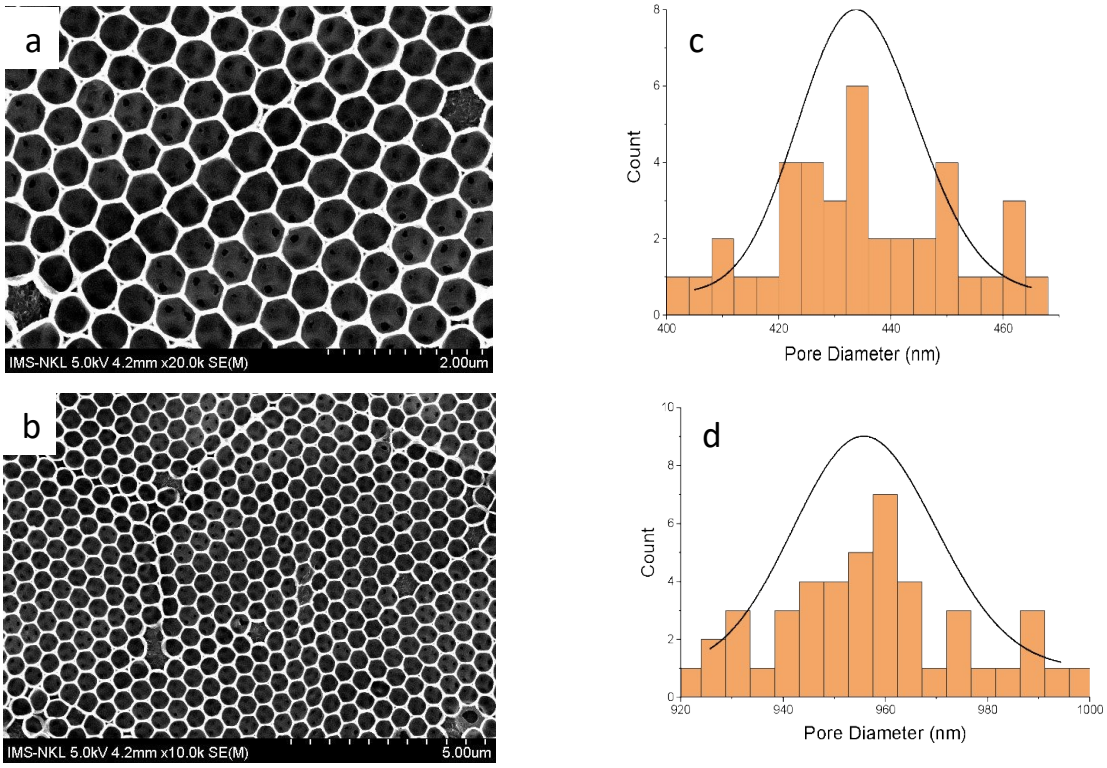


Figure SI 5: a) SEM images of IO-PEDOT from PS sphere templates of size 500 nm and (b) 1000 nm. Size distribution analyses for (c) 500 nm IO-PEDOT and (d) 1000 nm IO-PEDOT.

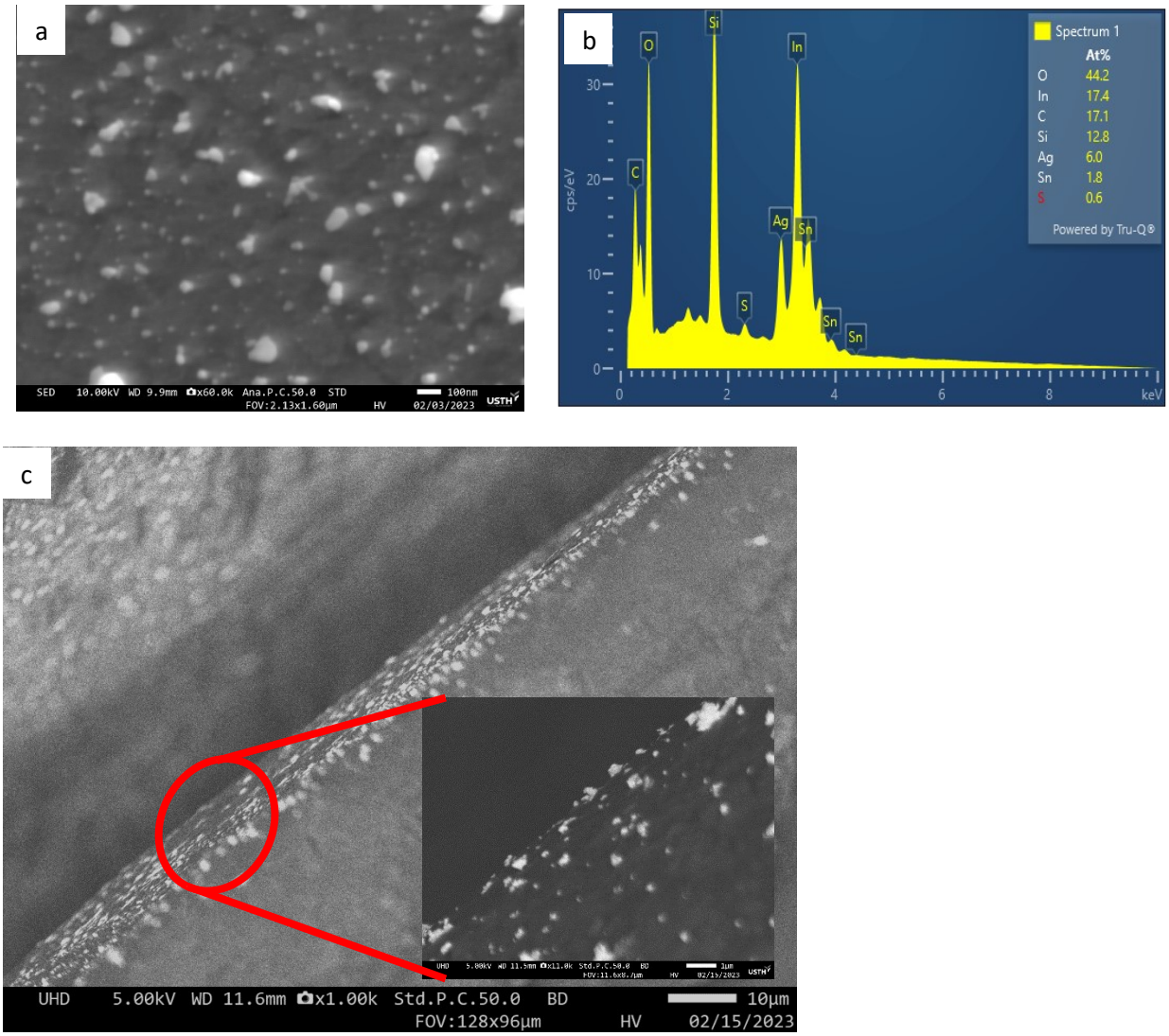


Figure SI 6: (a) SEM image and (b) corresponding EDX analysis of the Ag NPs-PEDOT hybrid material; (c) Cross-section SEM images of hybrid thin film at different magnifications.