

Supplementary Information

Photochemical processes developed in the composites based on MoS₂, poly(ortho-toluidine), and reduced graphene oxide

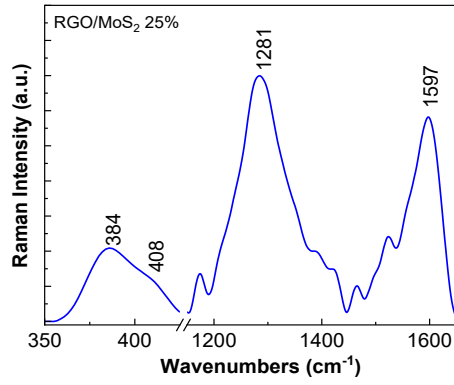
Madalina Cercel^{1,2}, Andreea Nila², Ion Smaranda², Andreea Androne², Teodora Burlanescu², Adam Lörinczi², Catalin Negrila², Matei Elena² and Mihaela Baibarac^{2*}

¹*University of Bucharest, Faculty of Physics, Atomistilor Street 405A, Magurele, Romania.*

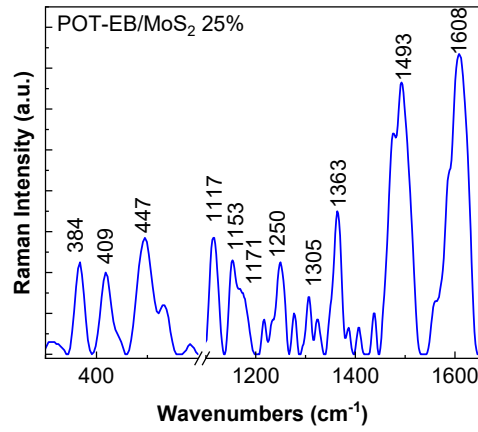
²*National Institute of Materials Physics, Laboratory of Optical Processes in Nanostructured Materials, Atomistilor street 405A, Magurele, Romania.*

Corresponding author: Dr. M. Baibarac

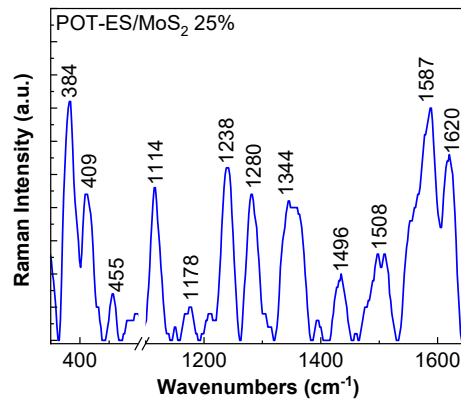
E-mail: barac@infim.ro



a

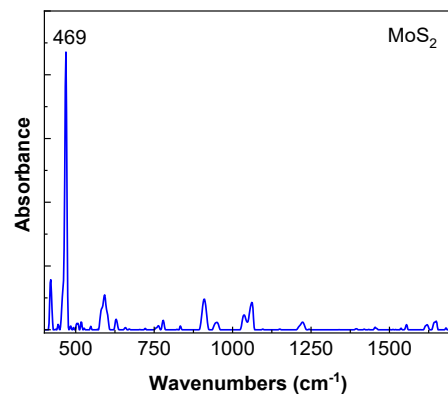


b

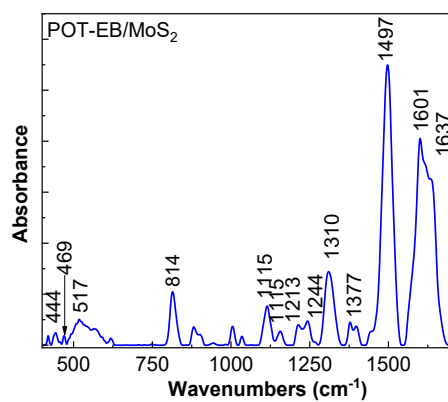


c

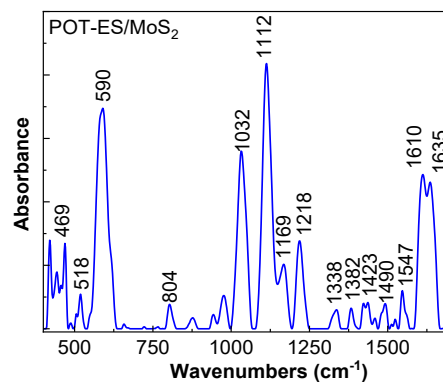
Figure S1. Raman spectra of the MoS₂/RGO (a), POT-EB/MoS₂ (b), and POT-ES/MoS₂ (c) composites, all having a concentration of MoS₂ equal to 25 wt.%.



a



b



c

Figure S2. FTIR spectra of MoS₂ (a), and the POT-EB/MoS₂ (b) and POT-ES/MoS₂ (c) composites, which have a MoS₂ concentration equal to 25 wt.%

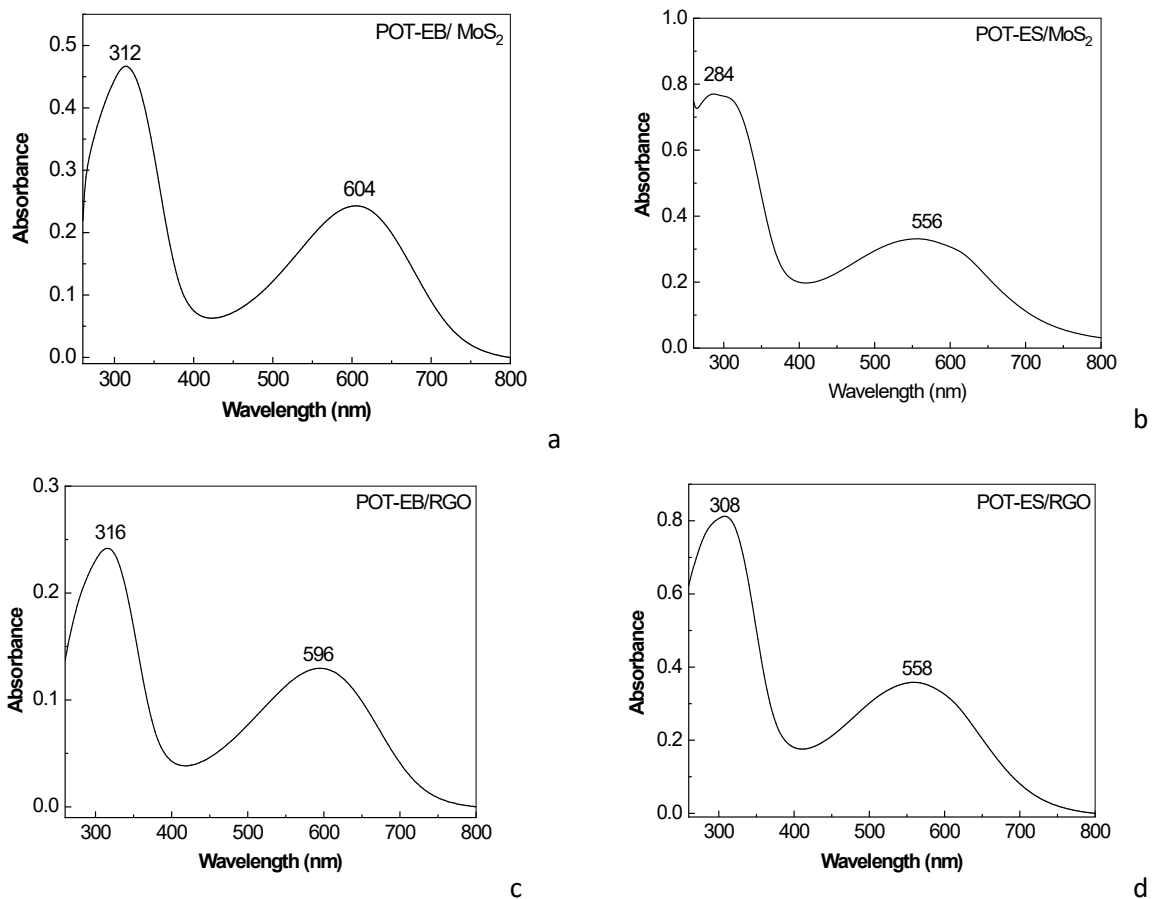


Figure S3. UV-VIS spectra of the POT-EB/MoS₂ (a), POT-ES/MoS₂ (b), POT-EB/RGO (c), and POT-ES/RGO (d) composites, which have a MoS₂ and RGO concentration equal to 25 wt.%

The synthesis of the POT-EB/RGO and POT-ES/RGO composites took place similarly to the protocol described in the main text for the ternary composites [23]. As observed in Figures S3c and S3d, in the case of the POT-EB/RGO and POT-ES/RGO composites, the characteristic RGO band in the 260–270 nm region is no longer visible in the UV-Vis spectrum due to the complete overlap with the intense POT absorptions, which dominate the UV region, as well as the blurring of the π - π^* transitions of RGO as a result of the electronic interactions between the two constituents. In addition, the absorption of RGO is much weaker than that of POT-EB and POT-ES, thus being masked in the composite.