Spectroscopic Ellipsometry of P3HT Layers Prepared by Spin Coating

Juraj Chlpík[1, a)], Soňa Kotorová[1], Tomáš Váry[1], Vojtech Nádaždy[2], and Július Cirák[1]

[1]*Institute of Physical and Nuclear Engineering, Faculty of Electrical Engineering and Information Technology, Slovak University of Technology, Ilkovičova 3, 812 19 Bratislava, Slovakia*
[2]*Institute of Physics, Slovak Academy of Sciences, Dúbravská cesta 9, 845 11 Bratislava, Slovakia*

[a)]Corresponding author: juraj.chlpik@stuba.sk

Abstract. P3HT belongs to the most progresive substance used in photovoltaics as a promissing material exhibiting interesting and useful physical properties. We applied the New amorphous material model derived by Horiba for optical characterization of P3HT layers prepared by spin coating deposition. As the first step, the thickness of the fabricated films in the range 20–250 nm were measured using three different methods – spectroscopic ellipsometry, spectroscopic optical reflectometry and profilometry. We demonstrated the validity of the chosen New amorphous material model in the spectral range 550–850 nm.