

- the changes in surfactant on U V radiation cause the changes in collective relaxation processes and may positively influence the transport of hole charge carriers after their injection or charge-transfer processes. This may positively influence the efficiency of conversion of hybrid solar cells.

Acknowledgements

The work in Czech Republic was supported by the Grant agency of the Czech Republic under the project 202/09/1206. The work in Slovak Republic was supported by the ASFEU project Applied research of advanced photovoltaic cells, Activity 4.2, ITMS code 26240220047, supported by the Research & Development Operational Programme funded by the ERDF and by Slovak grant agency VEGA 2/0041/11.

References

- [1] S. Gúnes, N. S. Sariciftci, Hybrid solar cells, *Inorganica Chimica Acta* 361, 2008, pp.581–588, D. J. Milliron, I. Gur, A. P. Alivisatos, Hybrid organic - Nanocrystal solar cells. *Mrs Bulletin*, 30, 2005, pp. 41-44.
- [2] W. U. Huynh, J. J. Dittmer, A. P. Alivisatos, Hybrid nanorod-polymer solar cells, *Science* 295, 2002, pp. 2425-2427.
- [3] W. U. Huynh, J. J. Dittmer, N. Tecler, D. J. Milliron, A. P. Alivisatos, K. W. J. Barnham, Charge transport in hybrid nanorod-polymer composite photovoltaic cells, *Physical Review B* 67, 2003, (11) 115326.
- [4] I. Gur, N. A. Fromer, C. P. Chen, A. G. Kanaras, A. P. Alivisatos, Hybrid solar cells with prescribed nanoscale morphologies based on hyperbranched semiconductor nanocrystals. *Nano Letters* 2007, 7, pp. 409 -414, J. Rohovec, J. Tousekova, J. Tousek, F. Schauer, I. Kuritka New cadmium sulfide nanomaterial for heterogenic organic photovoltaic cells, this conference.
- [5] Š. Lányi, V. Nádaždy, *Ultramicroscopy* 110, 2010, p. 685.
- [6] I. Thurzo, K. Gmucová, *Rev. Sci. Instrum.* 65, 1994, p.2244.
- [7] J. Toušek, J. Toušková, *Sol. Energy Mater. Solar. Cells*, 92, 2008, p. 1020.
- [8] J. Toušek, J. Toušková., I. Křivka, P. Pavlačková, D. Výprachtický, V. Cimrová, *Org. Electronics* 11, 2010, 50.
- [9] F. Schauer, P. Schauer, I. Kuřitka, H. Bao., Conjugated Silicon-Based Polymer Resists for Nanotechnologies: EB and UV Mediated Degradation Processes in Polysilanes. *Materials Transactions, Special Issue on Development and Fabrication of Advanced Materials Assisted by Nanotechnology and Microanalysis*, 51, 2010, pp.197-201.