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## Physics of one-dimensional hybrids based on carbon nanotubes

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## List of publications

From Zernike Institute for Advanced Materials:

Charge transfer excitons in low band gap polymer based solar cells and the role of processing additives.

M. C. Scharber, C. Lungenschmied, H. J. Egelhaaf, G. Matt, M. Bednorz, T. Fromherz, J. Gao, D. Jarzab, M. A. Loi, *Energy. Environ. Sci.*, (2011), DOI: 10.1039/c1ee02181h.

Low-Temperature Behaviour of Charge Transfer Excitons in Narrow-Bandgap Polymer-Based Bulk Heterojunctions.

D. Jarzab, F. Cordella, J. Gao, M. C. Scharber, H. J. Egelhaaf, M. A. Loi, *Adv. Eng. Mater.* **1**, 604 (2011).

Electronic interactions between “pea” and “pod”: the case of oligothiophenes encapsulated in carbon nanotubes.

J. Gao, P. Blondeau, P. Salice, E. Menna, B. Bártovec, C. Hébert, J. Leschner, U. Kaiser, M. Milko, C. Ambrosch-Draxl, M. A. Loi, *Small* **7**, 1807 (2011).

Selective Wrapping and Supramolecular Structures of Polyfluorene-Carbon Nanotube Hybrids.

J. Gao, M. A. Loi, E. J. F. de Carvalho, M. C. dos Santos, *ACS Nano* **5**, 3993 (2011).

DNA block copolymer doing it all: from selection to self-assembly of semiconducting carbon nanotubes.

M. Kwak, J. Gao, D. K. Prusty, A. J. Musser, V. A. Markov, N. Tombros, M. C. A. Stuart, W. R. Browne, E. J. Boekema, G. ten Brinke, H. T. Jonkman, B. J. van Wees, M. A. Loi, A. Herrmann, *Angew. Chem. Int. Ed.* **50**, 3206 (2011).

Effectiveness of sorting single-walled carbon nanotubes by diameter using polyfluorene derivatives.

J. Gao, M. Kwak, J. Wildeman, A. Herrmann, M. A. Loi, *Carbon*, **49**, 333 (2011).

Photophysics of polymer-wrapped single-walled carbon nanotubes.

J. Gao and M. A. Loi *Eur. Phys. J. B* **75**, 121 (2010).

Encapsulation of Conjugated Oligomers in Single-Walled Carbon Nanotubes: Towards Nanohybrids for Photonic Devices.

M. A. Loi, J. Gao, F. Cordella, P. Blondeau, E. Menna, B. Bartova, C. Hebert, S. Lazar, G. A. Botton, M. Milko, C. Ambrosch-Draxl, *Adv. Mater.* **22**, 1635 (2010).

Influence of the Bridging Atom on the Performance of a Low-Bandgap Bulk Heterojunction Solar Cell.

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Size-Dependent Electron Transfer from Colloidal PbS Nanocrystals to Fullerene.

A. Gocalinska, M. Saba, F. Quochi, M. Marceddu, K. Szendrei, J. Gao, M. A. Loi, M. Yarema, R. Seyrkammer, W. Heiss, A. Mura, G. Bongiovanni, *J. Phys. Chem. Lett.* **1**, 1149 (2010).

Excitonic effects enabling light emission in nano-sized peapods.

M. Milko, P. Puschnig, E. Menna, J. Gao, M. A. Loi, C. Ambrosch-Draxl, (submitted).

Extrinsic effects on the ambipolar electrical transport in semiconducting single-walled carbon nanotube transistors.

J. Gao, I. Iezhokin, M. A. Loi, (submitted).

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Controlling of the surface energy of the gate dielectric in organic field-effect transistors by polymer blend.

J. Gao, K. Asadi, JB. Xu, J. An, *Appl. Phys. Lett.* **94**, 093302 (2009).

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Supramolecular architectures, photophysics, and electroluminescence of 1,3,4-oxadiazole-based iridium(III) complexes: From mu-dichloro bridged dimer to mononuclear complexes.

LQ. Chen, CL. Yang, M. Li, JG. Qin, J. Gao, H. You, DG. Ma, *Cryst. Growth Des.* **7**, 39 (2007).

Thickness dependence of mobility in CuPc thin film on amorphous SiO<sub>2</sub> substrate.

J. Gao, JB. Xu, M. Zhu, N. Ke, DG. Ma, *J. Phys. D: Appl. Phys.* **40**, 5666 (2007).

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