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Polymer-wrapped carbon nanotubes for high performance field effect transistors

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List of Publications

- [1] S. Z. Bisri, J. Gao, **V. Y. Derenskiy**, W. Gomulya, I. Iezhokin, P. Gordiichuk, A. Herrmann, M. A. Loi, High Performance Ambipolar Field-Effect Transistor of Random Network Carbon Nanotubes. *Adv. Mater.* **2012**, *24*, 6147.
- [2] W. Gomulya, G. D. Costanzo, E. J. F. de Carvalho, S. Z. Bisri, **V. Y. Derenskiy**, M. Fritsch, N. Fröhlich, S. Allard, P. Gordiichuk, A. Herrmann, S. J. Marrink, M. C. dos Santos, U. Scherf, M. A. Loi, Semiconducting Single-Walled Carbon Nanotubes on Demand by Polymer Wrapping. *Adv. Mater.* **2013**, *25*, 2948.
- [3] **V. Y. Derenskiy**, W. Gomulya, J. M. S. Rios, M. Fritsch, N. Fröhlich, S. Jung, S. Allard, S. Z. Bisri, P. Gordiichuk, A. Herrmann, U. Scherf, M. A. Loi, Carbon Nanotube Network Ambipolar Field-Effect Transistors with 10^8 On/Off Ratio. *Adv. Mater.* **2014**, *26*, 5969.
- [4] W. Gomulya, J. M. Salazar Rios, **V. Y. Derenskiy**, S. Z. Bisri, S. Jung, M. Fritsch, S. Allard, U. Scherf, M. C. dos Santos, M. A. Loi, Effect of temperature on the selection of semiconducting single walled carbon nanotubes using Poly(3-dodecylthiophene-2,5-diyl). *Carbon* **2015**, *84*, 66.
- [5] J. M. Salazar-Rios, W. Gomulya, **V. Y. Derenskiy**, J. Yang, S. Z. Bisri, Z. Chen, A. Facchetti, M. A. Loi, Selecting Semiconducting Single-Walled Carbon Nanotubes with Narrow Bandgap Naphthalene Diimide-Based Polymers. *Adv. Electron. Mater.* **2015**, *1*, n/a.
- [6] S. Z. Bisri, **V. Y. Derenskiy**, W. Gomulya, J. M. Salazar-Rios, M. Fritsch, N. Fröhlich, S. Jung, S. Allard, U. Scherf, M. A. Loi, Anomalous Carrier Transport in Ambipolar Field-Effect Transistor of Large Diameter Single-Walled Carbon Nanotube Network. *Adv. Electron. Mater.* **2016**, *2*, n/a.
- [7] W. Gomulya, **V. Y. Derenskiy**, E. Kozma, M. Pasini, M. A. Loi, Polyazines and Polyazomethines with Didodecylthiophene Units for Selective Dispersion of Semiconducting Single-Walled Carbon Nanotubes. *Adv. Funct. Mater.* **2015**, *25*, 5858.
- [8] S. G. Bucella, J. M. Salazar-Rios, **V. Y. Derenskiy**, M. Fritsch, U. Scherf, M. A. Loi, M. Caironi, Inkjet Printed Single-Walled Carbon Nanotube Based Ambipolar and Unipolar Transistors for High-Performance Complementary Logic Circuits. *Adv. Electron. Mater.* **2016**, *2*, n/a.

- [9] **V. Y. Derenskiy**, W. Gomulya, W. Talsma, J. M. Salazar-Rios, M. Fritsch, P. Nirmalraj, H. Riel, S. Allard, U. Scherf, M. A. Loi, On-Chip Chemical Self-Assembly of Semiconducting Single-Walled Carbon Nanotubes (SWNTs): Toward Robust and Scale Invariant SWNTs Transistors. *Adv. Mater.* **2017**, n/a.
- [10] A. G. Shulga, **V. Y. Derenskiy**, J. M. Salazar-Rios, D. N. Dirin, F. Martin, M. V. Kovalenko, S. Ullrich, M. A. Loi, An all-solution-based hybrid CMOS-like quantum dot/carbon nanotube inverter. *Adv. Mater.* **2017**, n/a.
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