

# Public dissemination from PolyNet Research collaborations during 2010

PolyNet internal document

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This document contains a summary of public dissemination (Journal articles, conference presentations/posters, seminars, conference sessions, workshops, demonstrations, etc) from PolyNet research collaborations during 2010. It has been checked against all internal RC reports for 2010, to make sure that all dissemination is accounted for.

Known dissemination that will occur during 2011 is also reported.

Contributions marked “general” refer to dissemination that promotes OLAE in general but that is not mainly a result of PolyNet research collaboration.

## Count:

Conference contributions	41
Conference sessions	1 (ISFOE)
Journal articles	7
Submitted journal articles	3
Journal articles under preparation	3
Books	1
Demonstrations	6
Press release	2
Patents	0

<b>Date</b>	<b>Research Collaboration</b>	<b>Type of dissemination</b>	<b>Title, author, etc</b>
January 2010	Device Modelling	Journal article	Compact model for organic thin film transistor Li, L.; Marien, H.; Genoe, J.; Steyaert, M. and Heremans, P. IEEE Electron Device Letters, 31, 210, 2010

January 2010	Device Modelling	Journal article	A compact model for polycrystalline pentacene thin-film transistor Li, L.; Debucquoy, M.; Genoe, J. and Heremans, P. Journal of Applied Physics, 107, 024519, 2010
February 2010	General	Presentation	Robust digital design in organic electronics by dual-gate technology Myny, K.; Beenhakkers, M.; van Aerle, N.; Gelinck, G.; Genoe, J.; Dehaene, W. and Heremans, P. IEEE International Solid-State Circuits Conference – ISSCC 2010
March 2010	General	Presentation	Towards EPC-compatible organic RFID tags Myny, K.; Steudel, S.; Vicca, P.; Smout, S.; Beenhakkers, M.; van Aerle, N.; Furthner, F.; van der Putten, B.; Tripathi, A.; Gelinck, G.; Genoe, J.; Dehaene, W. and Heremans, P. Advances in Analog Circuit Design – AACD 2010
April 2010	Ordered layers	Presentation	„Flexible Organic Field-Effect-Transistors”; J. Ulanski, T. Marszalek, S. Kotarba, M. Wiatrowski, J. Jung, E. Dobruchowska, A. Nosal, M. Gazicki-Lipman; International Symposium on Flexible Electronics 2010 (ISFE’10), Palma de Mallorca, Spain.
April 2010	Laser Ablation	Presentation	Vertical Electrolyte-gated OFETs: Towards Roll-to-roll Fabrication J. Liu MRS Spring Meeting 2010, San Fransisco, USA
April 2010	Device Modelling	Oral presentation	Impact of Universal Mobility Law on Polycrystalline Organic device and circuit operation M. Raja and W. Eccleston ISFE Conference, Palma de Majorca, Spain, April 2010

April 2010	Ordered layers	Poster	<p>“One-step produced bi-functional composites obtained by zone casting technique for flexible OFET’s”;</p> <p>T. Marszalek, E. Dobruchowska, M. Wiatrowski, J. Ulanski;</p> <p>The First Polish-French Workshop on Organic Electronic and Nanophotonics, Świeradów Zdroj, Poland.</p>
April 2010	Ordered layers	Presentation	<p>”Organiczne i Elastyczne Tranzystory polowe dla ‘Plastikowej’ Elektroniki” ;</p> <p>T. Marszalek, S. Kotarba, P. Miskiewicz, M. Wiatrowski, A. Nosal, J. Jung, E. Dobruchowska, M. Gazicki-Lipman, W. Maniukiewicz, J. Ulanski;</p> <p>I Konferencja Naukowo-Techniczna ”Organiczna, Drukowana i Elastyczna Elektronika” Warsaw, Poland.</p>
April 2010	Ordered layers	Presentation	<p>„Highly Anisotropic Layers of Oligothiophenes”;</p> <p>T. Marszalek, P. Miskiewicz, J. Jung, E. Dobruchowska, M. Melucci, G. Barbarella;</p> <p>6<sup>th</sup> International ECNP Conference on Nanostructured Polymers&amp;Nanocomposites, Madrid, Spain.</p>
May 2010	PolyNet	Press release	Press release for Polynet/Flexnet in anticipation of the LOPE-C conference
May 2010	Device Modelling	Journal article	<p>Organic RFID transponder chip with data rate compatible with electronic product coding</p> <p>Myny, K.; Steudel, S.; Smout, S.; Vicca, P.; Furthner, F.; van der Putten, B.; Tripathi, A.; Gelinck, G.; Genoe, J.; Dehaene, W. and Heremans, P.</p> <p>Organic Electronics, 11, 1176, 2010</p>
May 2010	General	Conference	<p>Organic thin-film transistors: technology and applications</p> <p>Heremans, P.</p> <p>4<sup>th</sup> SOLVAY-COPE Symposium on Organic Electronics.</p>

May 2010	Integration	Poster	<p>Easy, inexpensive, solution-processed high-k gate dielectric materials for large area circuit applications</p> <p>Lin, W.; Muller, R.; Myny, K.; Steudel, S.; Genoe, J. and Heremans, P.</p> <p>4<sup>th</sup> Solvay COPE Symposium on Organic Electronics 2010</p>
June 2010	General	Presentation	<p>Organic transistor technology options for device performance versus technology options for increased circuit reliability and yield on foil</p> <p>Genoe, J.; Myny, K.; Steudel, S.; Smout, S.; Vicca, P.; van der Putten, B.; Tripathi, A.; van Aerle, N.; Gelinck, G.; Dehaene, W. and Heremans, P.</p> <p>68th Device Research Conference 2010</p>
June 2010	Nanoimprint Lithography	Presentation	<p>Hybrid Roll-to-Roll Nanoimprint Lithography for OTFT Fabrication</p> <p>Herbert Gold</p> <p>LOPE-C, Frankfurt, June 2, 2010</p>
June 2010	Nanoimprint Lithography	Conference paper	<p>Hybrid Roll-to-Roll Nanoimprint Lithography for OTFT Fabrication</p> <p>Herbert Gold, Barbara Stadlober, Ursula Palfinger, Anja Haase Georgi Lalev, Hassan Hirshy Markus Burghart, Eva Hammerl, Gerhard Klink Mari Ylikunnari, Jukka Hast, Olli-Heikki Huttunen, Johanna Hiitola-Keinänen, Markku Käsäkoski Cedric Rolin, Jan Genoe Romain Gwoziecky, Anne-Laure Seiler Munira Raja</p> <p>Proceedings of LOPE-C 2010</p>

June 2010	Laser Ablation	Oral presentation	<p>“Excimer laser ablation as industrial production tool for structuring ITO anodes for flexible OLEDs”</p> <p>A.-L. Seiler, I. Chartier, J.-Y. Laurent, R. Suhonen, J. Hast, M. Käsäkoski, P. Petkov, T. Blaudeck, R. R. Baumann</p> <p>Proceedings of Large-Area, Organic and Polymer Electronics Convention 2010 (LOPE-C 2010), Frankfurt/M., June 2010, paper ID 10.3, page 152-155. Organic Electronics Association (OE-A), ISBN 978-3-00-029955-1.</p>
June 2010	Laser Ablation	Poster	<p>“Comparison of Laser-Ablation Techniques for Microstructuring Gravure-Printed PEDOT:PSS and Sputtered ITO on PET Substrates”</p> <p>J. Hast, I. Vanttaja, R. Penttilä, P. Laakso, M. Käsäkoski, A.-L. Seiler, I. Chartier, P. Petkov, G. Lalev, P. Norberg, T. Blaudeck, R. R. Baumann</p> <p>Proceedings of Large-Area, Organic and Polymer Electronics Convention 2010 (LOPE-C 2010), Frankfurt/M., June 2010, paper ID P3.4, page 281-284. Organic Electronics Association (OE-A), ISBN 978-3-00-029955-1.</p>
June 2010	Integration, Laser Ablation, Nanoimprint Lithography, Thin Film Batteries	Demonstrators	<p>Presentation of projects (leaflet) and demonstrator showpieces at Quadriga Booth at LOPE-C 2010 conference</p>
June 2010	Device Modelling	Oral presentation	<p>Temperature dependency of TIP-based Organic diodes</p> <p>S. Afzal, M. Raja and W. Eccleston</p> <p>ICOE Conference, Paris, France. June 2010</p>
June 2010	Nanoimprint Lithography	Presentation (Tutorial)	<p>High-Resolution Printing of organic electronic devices</p> <p>Barbara Stadlober</p> <p>Tutorial 22.6.2010, ICOE 2010, Paris</p>

July 2010	Integration	Presentation	<p>Low cost solution-processed high-k gate dielectric materials for large area circuit applications</p> <p>Lin, W.; Muller, R.; Steudel, S.; Genoe, J. and Heremans, P.</p> <p>3<sup>rd</sup> International Symposium on Flexible Organic Electronics – IS-FOE10</p>
July 2010	Ordered layers	Poster	<p>“Encapsulation Quality Inspection in Printed Electronics with Ultra-High Resolution Optical Coherence Tomography”;</p> <p>J. Czajkowski, T. Fabritius, T. Marszałek, A. Nosal, M. Gazicki-Lipman, J. Ulanski, R. Myllylä;</p> <p>3<sup>rd</sup> International Symposium on Flexible Organic Electronics (IS-FOE10), Halkidiki, Greece.</p>
July 2010	Ordered layers	Poster	<p>“Fabrication of large area masters for roll-to-roll imprinting of organic electronic devices on flexible substrates”;</p> <p>G.Lalev, H.Hirshy, S.Scholz, V.Velkova, S.Dimova, H.Gold, B.Stadlober, A.Haase, J.Hiitola-Keinänenb, J.Hast, M. Käsäkoski;</p> <p>3<sup>rd</sup> International Symposium on Flexible Organic Electronics (IS-FOE10), Halkidiki, Greece.</p>
July 2010	Ordered layers	Presentation	<p>“Broadband impedance spectroscopy of organic semiconductors”;</p> <p>K. Kisiel, J. Jung, J. Ulanski;</p> <p>3<sup>rd</sup> International Symposium on Flexible Organic Electronics (IS-FOE10), Halkidiki, Greece.</p>
July 2010	Ordered layers	Poster	<p>“Role of geometry, substrates and atmosphere on performance of OFET’s based on TTF derivatives”;</p> <p>T. Marszalek, B. Luszczynska, A. Nosal, R. Pfattner, J. Jung, S. Kotarba, M. Mas-Torrent, M. Gazicki-Lipman, C. Crickert, G. Schmidt, C. Rovira, J. Ulanski;</p> <p>3<sup>rd</sup> International Symposium on Flexible Organic Electronics (IS-FOE10), Halkidiki, Greece.</p>

July 2010	Ordered layers	Poster	<p>“Encapsulation Quality Inspection in Printed Electronics with Ultra-High Resolution Optical Coherence Tomography”;</p> <p>J. Czajkowski, T. Fabritius, T. Marszalek, A. Nosal, M. Gazicki-Lipman, J. Ulanski, R. Myllylä;</p> <p>3<sup>rd</sup> International Symposium on Flexible Organic Electronics (IS-FOE10), Halkidiki, Greece.</p>
July 2010	General	Press release	<p>Opportunities for organic thin-film transistor technology</p> <p>Van Bavel, M.; Heremans, P. and Gelinck, G.</p> <p>Industrial + Specialty Printing – iSP, 22, 2010</p>
September 2010	Ordered layers	Journal article	<p>“Optical and electrical anisotropy of ordered layers of rigid core semiconductor – dithienothiophene derivative”;</p> <p>T. Marszalek, E. Dobruchowska, J. Jung, J. Ulanski, M. Melucci and G. Barbarella;</p> <p>The European Physical Journal Applied Physics. Published online: 2 September 2010 DOI: 10.1051/epjap/2010107.</p>
September 2010	Laser ablation	Journal article	<p>Vertical Polyelectrolyte-gated Organic Field-effect Transistors</p> <p>J. Liu, L. Herlogsson, A. Sawatdee, P. Favia, M. Sandberg, X. Crispin, I. Engquist, M. Berggren</p> <p>Applied Physics Letters 97, 103303 (2010)</p>
September 2010	Ordered layers	Poster	<p>“Evaluation of thin layers for printed electronics with submicron resolution Optical Coherence Tomography”;</p> <p>J. Czajkowski, T. Fabritius, E. Alarousu, T. Prykäri, J. Ulanski, T. Marszalek, M. Gazicki-Lipman, A. Nosal, R. Myllylä;</p> <p>18th International Conference on Advanced Laser Technologies (ALT’10).</p>

September 2010	Ordered layers	Poster	<p>„Porównanie organicznych tranzystorów polowych otrzymanych z monokryształów i z warstw polikrystalicznych”;</p> <p>T. Marszałek, M. Wiatrowski, I. Tszedel, J. Jung, J. Ulański, M. Melucci, G. Barbarella;</p> <p>XVII Ogólnopolska Konferencja KRYSZTAŁY MOLEKULARNE 2010, Polanica Zdrój, Poland.</p>
September 2010	Ordered layers	Poster	<p>„Jedno-etapowa metoda wytwarzania organicznych tranzystorów polowych”;</p> <p>T. Marszałek, B. Łuszczynska, M. Wiatrowski, J. Jung, E. Dobruchowska, J. Ulański.;</p> <p>XVII Ogólnopolska Konferencja KRYSZTAŁY MOLEKULARNE 2010, Polanica Zdrój, Poland.</p>
October 2010	Ordered Layers	Book	<p>Vapor Phase Deposition of Organic Semiconductors: Application to Thin Film Transistors</p> <p>Rolin C.</p> <p>Lambert Academic Publishing Group, Saarbrucken 2010. ISBN 978-3-8383-9660</p>
October 2010	Ordered layers	Poster	<p>“Role of geometry, substrates and atmosphere on performance of OFET’s based on TTF derivatives”;</p> <p>T. Marszalek, B. Luszczynska, A. Nosal, R. Pfattner, J. Jung, S. Kotarba, M. Mas-Torrent, M. Gazicki-Lipman, C. Crickert, G. Schmidt, C. Rovira, J. Ulanski;</p> <p>Plastic Electronics EUROPE 2010, Dresden, Germany.</p>
October 2010	Laser Ablation	Oral presentation	<p>“Excimer laser ablation as industrial production tool for structuring ITO anodes for flexible OLEDs”</p> <p>A.-L. Seiler, I. Chartier, J.-Y. Laurent, R. Suhonen, J. Hast, M. Känsäkoski, P. Petkov, G. Lalev, I. Engquist, M. Sandberg, P. Norberg, T. Blaudeck, R. R. Baumann</p> <p>International Symposium on Laser Micromachining, Chemnitz, Oct 27-28, 2010.</p>

October 2010	General	Conference	<p>Increasing complexity of organic transistor circuits on foil: 128 bit organic RFID tags and flexible display backplanes</p> <p>Genoe, J.; Myny, K.; Steudel, S.; Smout, S.; Vicca, P.; van der Putten, B.; Tripathi, A.; Van Aerle, N.; Grillberger, C.; Hild, O.; Gelinck, G.; Dehaene, W. and Heremans, P.</p> <p>6<sup>th</sup> Global Plastic Electronics Conference</p>
October 2010	Integration	Demonstration	<p>Demo1 and Demo2 from the Integration collaboration</p> <p>Dutch design week, Eindhoven, the Netherlands</p>
December 2010	Ordered Layers	Conference	<p>Effect of Carrier Gas Pressure on the Growth of Pentacene by Organic Vapor Phase Deposition</p> <p>Rolin, C.; Vasseur, K.; Muller, R.; Willegems, M.; Genoe, J. and Heremans, P.</p> <p>MRS Fall 2010, Boston, USA</p>
December 2010	General	Oral presentation	<p>High Volume R2R Manufacturing of Electronics on Paper and Plastic Substrates</p> <p>Göran Gustafsson</p> <p>MRS Fall 2010, Boston, USA</p>
December 2010	General	Oral presentation	<p>Hybrid R2R Machine Concept for Aligned Deposition of Functional Materials</p> <p>A. Willert, F. Siegel, M. Hösel, C. Akowanou, D. Knittel, R. R. Baumann</p> <p>MRS Fall 2010, Boston, USA</p>
December 2010	General	Oral presentation	<p>Towards Roll-to-Roll Fabricated Organic Devices</p> <p>Paul Blom, Ton van Mol, Ronn Andriessen, Andreas Dietzel, Erwin Meinders, Gerwin Gelinck, Herman Schoo</p> <p>MRS Fall 2010, Boston, USA</p>

December 2010	General	Oral presentation	<p>Process Control Challenges in Roll-to-Roll Manufacturing of Printable Functional Devices</p> <p>Henrik G. Sandberg, Ari Alastalo, Jukka Hast, Markus Tuomikoski, Mikko Keranen, Terho Kololuoma and Arto Maaninen</p> <p>MRS Fall 2010, Boston, USA</p>
December 2010	General	Oral presentation	<p>Large-area Fabrication of Organic Electronic Devices for Multi-Component Sensors and Logic Circuits</p> <p>Barbara Stadlober, Ursula Palfinger, Herbert Gold, Anja Haase, Alex Fian, Maria Belegatis, Martin Zirkl, Gregor Scheipl, Julien Magnien</p> <p>MRS Fall 2010, Boston, USA</p>
December 2010	General	Conference	<p>Application of organic thin-film transistors for circuits on flexible foils</p> <p>Heremans, P.; Myny, K.; Marien, H.; van Veenendaal, E.; Steudel, S.; Genoe, J.; Steyaert, M. and Gelinck, G.</p> <p>IDW '10 The 17th International Display Workshops</p>
2010	Ordered layers	Journal article	<p>Design and validation of a novel master-making process chain for organic and large area electronics on flexible substrates</p> <p>V. Velkova, G. Lalev, H. Hirshy, S. Scholz, J. Hiitola-Keinänen, H. Gold, A. Haase, J. Hast, B. Stadlober and S. Dimov</p> <p>Microelectronic Engineering 87 (2010), pp. 2139-2145</p>
2010	Ordered layers	Journal article	<p>Layer-based FIB milling of complex 3D features</p> <p>V. Velkova, G. Lalev, R. Leach, D. Dimov</p> <p>Submitted to Materials Science and Engineering: B</p>

2010	Ordered layers	Presentation	„Organic Field Effect Transistor –TFT” T. Marszalek, M. Wiatrowski, E. Dobruchowska, J. Ulanski; IV International Warsaw Invention Show, Warsaw, Poland
2010	Ordered layers	Presentation	„Organic Field Effect Transistor –TFT” T. Marszalek, M. Wiatrowski, E. Dobruchowska, J. Ulanski; Seoul International Invention Fair 2010; Seoul, Korea.
2010	Device Modelling	Journal article (submitted)	Impact of Universal Mobility Law on Polycrystalline Organic device and circuit operation M. Raja and W. Eccleston Submitted to International Journal of High Speed Electronics and Systems (IJHSES), November 2010
2010	Device Modelling	Journal article (submitted)	Temperature dependency of TIP-based Organic diodes S. Afzal, M. Raja and W. Eccleston Submitted to Organic Electronics, December 2010
2010	Ordered layers	Journal article (submitted)	„Ultra-High Resolution Optical Coherence Tomography for Encapsulation Quality Inspection: Study based on Parylene C protective polymer layers” J. Czajkowski, T. Fabritius, J. Ulanski, T. Marszalek, M. Gazicki-Lipman, A. Nosal, R. Sliz, E. Alarousu, T. Prykäri, R. Myllylä, and G. Jabbour Submitted to Applied Physics B, special edition for the ALT’10 conference.
2010	Ordered layers	Journal article (under preparation)	Three journal articles under preparation, on the subjects of i) optical properties of oriented BTTh; ii) semiconductors/dielectric composites for OFETs applications; iii) optical properties (absorption and photoluminescence anisotropy) of oriented zone-cast PTCDI-C5(3)

January 2011	Integration	Demonstration movie	Internet publication ( <a href="http://www.noe-polynet.eu">www.noe-polynet.eu</a> ) of movie showing the Demo2 demonstrator in operation
April 2011	Device Modelling	Presentation	Modelling of polycrystalline organic thin-film transistor and Schottky diode for the design of simple functional blocks  M. Raja, D. Donaghy, R. Myers and W. Eccleston  Submitted abstract to MRS Spring 2011 Conference
May 2011	Device Modelling	Invited presentation	Novel concepts on the design, processes and models for high performance and low-cost functional blocks  M. Raja  International Symposium on Organic Semiconductor Materials and Devices at the ECS Meeting, Montreal, Canada. May 2011
June 2011	Thin Film Batteries	Presentation	Screen printing of electrode materials for combustible thin-film batteries  Submitted for presentation at LOPE-C 2011, Frankfurt, Germany