

**Wallonia Alliance for Research in Energy (WARE)**  
**Thematic group on Solar Photovoltaic Energy**

**Peer-reviewed international publications 2006-2011**

1. The Influence of the Intermolecular Orientation on the Photoinduced Charge Transfer Kinetics in Self-Assembled Aggregates of Donor-Acceptor Arrays.  
E.H.A. Beckers, S.C.J. Meskers, A.P.H.J. Schenning, Z. Chen, F. Würthner, P.Marsal, D. Beljonne, J. Cornil, and R.A.J. Janssen.  
Journal of the American Chemical Society 128 (2006) 649-657.
2. Pathways for Photoinduced Charge Generation and Recombination at Donor-Acceptor Heterojunctions: The Case of Oligophenylenevinylene-Perylene Bisimide Complexes.  
A. Burquel, V. Lemaury, D. Beljonne, R. Lazzaroni, and J. Cornil.  
Journal of Physical Chemistry A 110 (2006) 3447-3453.
3. Influence of Copolymer Interface Orientation on the Optical Emission of Polymeric Semiconductor Heterojunctions  
P. Sreearunothai, A.C. Morteani, I. Avilov, J. Cornil, D. Beljonne, R.H. Friend, R.T. Phillips, C. Silva, and L.M. Herz.  
Physical Review Letters 96 (2006) 117403.
4. Charge Hopping in Organic Semiconductors: Influence of Molecular Parameters on Macroscopic Mobilities in Model One-Dimensional Stacks.  
Y. Olivier, V. Lemaury, J.L. Brédas, and J. Cornil.  
Journal of Physical Chemistry A 110 (2006) 6356-6364.
5. Pathways for Resonant Energy Transfer in Oligo(phenylenevinylene)-Fullerene Dyads: An Atomistic Model.  
T.I. Hukka, T. Hoiwonon, E. Hennebicq, J.L. Brédas, R.A.J. Janssen, and D. Beljonne.  
Advanced Materials 18 (2006) 1301-1306.
6. Effect of Interfaces on the Alignment of a Discotic Liquid-Crystalline Phthalocyanine.  
V. De Cupere, J. Tant, P. Viville, R. Lazzaroni, W. Osikowicz, W.R. Salaneck, and Y.H. Geerts.  
Langmuir 22 (2006) 7798-7806.
7. Chromophores in Phenylenevinylene-Based Conjugated Polymers: Role of Conformational Kinks and Chemical Defects  
E. Hennebicq, C. Deleener, J.L. Brédas, G.D. Scholes, and D. Beljonne.  
Journal of Chemical Physics 125 (2006) 054901
8. Transparent, Plastic, Low-Work-Function Poly(3,4-ethylenedioxythiophene) Electrodes.  
L. Lindell, A. Burquel, F.L.E. Jakobsson, V. Lemaury, M. Berggren, R. Lazzaroni, J. Cornil, W.R. Salaneck, and X. Crispin.  
Chemistry of Materials 18 (2006) 4246-4252.
9. Charge transport properties of a metal-free phthalocyanine discotic liquid crystal.  
C. Deibel, D. Janssen, P. Heremans, V. De Cupere, Y. Geerts, M.L. Benkhedir, G.J. Adriaenssens,  
Organic Electronics, 2006, 7, 495-499.
10. Highly sensitive spectroscopic characterization of inorganic and organic heterojunctions for solar cells.  
K. Vandewal, L. Goris, K. Haenen, Y. Geerts, J. V.Manca,  
Eur. Phys. J.: Applied Physics 2006, 36, 281-283.
11. Optical Bandgaps of  $\pi$ -Conjugated Organic Materials at the Polymer Limit: Experiment and Theory.  
J. Gierschner, J. Cornil, and H.J. Egelhaaf.  
Advanced Materials 19 (2007) 173-191.
12. CT-CT Annihilation in Rigid Perylene End-Capped Pentaphenylenes.

- E. Fron, T.D.M. Bell, A. Van Vooren, G. Schweitzer, J. Cornil, D. Beljonne, P. Toele, J. Jacob, K. Müllen, J. Hofkens, M. van der Auweraer, and F.C. De Schryver.  
*Journal of the American Chemical Society* 129 (2007) 610-619.
13. Solid-state Assemblies and Optical Properties of Conjugated Oligomers Combining Fluorene and Thiophene Units.  
M. Surin, P. Sonar, A.C. Grimsdale, K. Müllen, S. De Feyter, S. Habuchi, S. Sarzi, E. Braeken, A. Ver Heyen, M. Van der Auweraer, F.C. De Schryver, M. Cavallini, J.F. Moulin, F. Biscarini, C. Femoni, R. Lazzaroni, and Ph. Leclère.  
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14. Supramolecular Assembly of Conjugated Polymers: From Molecular Engineering to Solid-State Properties.  
Ph. Leclère, M. Surin, P. Brocorens, M. Cavallini, F. Biscarini, and R. Lazzaroni.  
*Materials Science and Engineering R* 55 (2006) 1-56.
15. Non-conjugated, Phenyl Assisted Coupling in Through Bond Electron Transfer in a Perylenemonoimide-Triphenylamine System.  
T.D.M. Bell, A. Stefan, V. Lemaure, S. Bernhardt, K. Müllen, J. Cornil, D. Beljonne, J. Hofkens, M. Van der Auweraer, and F.C. De Schryver.  
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S. Coropceanu, J. Cornil, D.A. da Silva Filho, Y. Olivier, R. Silbey, and J.L. Brédas  
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17. Impact of Bridging Units on the Dynamics of Charge Generation and Recombination in Organic Solar Cells.  
A. Van Vooren, V. Lemaure, A. Ye, D. Beljonne, and J. Cornil  
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18. Influence of Supramolecular Organization on Energy Transfer Properties in Chiral Oligo(p-phenylene vinylene) Porphyrin Assemblies.  
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19. Singlet-Singlet Annihilation Leading to a Charge-Transfer Intermediate in Chromophore-End-Capped Pentaphenylenes.  
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20. Liquid Crystalline Octaalkoxycarbonyl Phthalocyanines: Design, Synthesis, Electronic Structure, Self-aggregation and Mesomorphism.  
S. Sergeev, E. Pouzet, O. Debever, J. Levin, J. Gierschner, J. Cornil, R. G. Aspe, Y. H. Geerts  
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21. Discotic Liquid Crystals: a New Generation of Organic Semiconductors.  
S. Sergeev, W. Pisula, Y. H. Geerts  
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22. Energy Transport along Conjugated Polymer Chains: Through-Space or Through-Bond?  
Van Averbeke, D. Beljonne, and E. Hennebicq.  
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23. Does Förster Theory Predict the Rate of Electronic Energy Transfer for a Model Dyad at Low Temperature ?  
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24. Intrachain versus Interchain Electron Transport in Poly(fluorene-*alt*-benzothiadiazole): A Quantum-Chemical Insight.  
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25. Electronic Structures of Interfacial States Formed at Polymeric Semiconductor Heterojunctions.  
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27. Optoelectronic and Charge Transport Properties at Organic/Organic Semiconductor Interfaces : Comparison between Polyfluorene-Based Polymer Blend and Copolymer.  
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28. An Oligomer Study to Small Band Gap Polymers  
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29. Trap Limited Exciton Transport in Conjugated Polymers  
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30. Conformational Effects on Excitation Transport along Conjugated Polymer Chains.  
B. Van Averbeke and D. Beljonne.  
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31. Synthesis, Characterization and Comparative Study of Thiophene-Benzothiadiazole Based Donor-Acceptor-Donor (D-A-D) Materials.  
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34. On the Origin of Small Band Gaps in Alternating Thiophene – Thienopyrazine Oligomers.  
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Y. Olivier, L. Muccioli, V. Lemaire, Y.H. Geerts, C. Zannoni, and J. Cornil.  
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36. Molecular Understanding of Organic Solar Cells: The Challenges.  
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37. Electronic Structure and Geminate Pair Energetics at Organic/Organic Interfaces: The Case of Pentacene/C<sub>60</sub> Heterojunctions.  
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41. Mechanical properties of anodic aluminum oxide for microelectromechanical system applications  
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42. Miscibility between Differently Shaped Mesogens: Structural and Morphological Study of a Phthalocyanine-Perylene Binary System.  
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Sara Stas, Sergey Sergeev, Yves Geerts.  
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47. Charge-Transfer Excitons in Strongly Coupled Organic Semiconductors  
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64. Doping and photo-induced current in discotic liquid crystals thin films: Long-time and temperature effects

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