

## **Book Chapters**

- **Handbook of carbon nano materials - Materials and Fundamental Applications** Edited by Francis D'Souza and Karl M. Kadish. World Scientific Publishing Co.
- **Organic Photovoltaics: Materials, Device Physics, and Manufacturing Technologies 2<sup>nd</sup> Edition**, Edited by Christoph Brabec, Vladimir Dyakonov, and Ullrich Scherf WILEY-VCH (submitted)

## **Publications**

1. **“Synthesis and Characterization of Conjugated Polymers and Their Blends for Optoelectronic Applications”**  
**Solon P. Economopoulos**; Giannis K. Govaris; Christos L. Chochos; Aikaterini K. Andreopoulou; Nikos P. Tzanetos; Joannis K. Kallitsis; Panayiotis Yiannoulis; Vasilis G. Gregoriou  
*Macromolecular Symposia*, **2004**, 205, 19
2. **“Synthesis and Optical Properties of New End-Functionalized Polyquinolines”**  
**Solon P. Economopoulos**; Aikaterini K. Andreopoulou; Vasilis G. Gregoriou; Joannis K. Kallitsis  
*Chemistry of Materials*, **2005**, 17, 1063
3. **“Bulk Heterojunction Photovoltaic Cells From Polymer Mixtures With Soluble Oxadiazole and Quinoline Polymers as Electron Acceptors”**  
**Solon P. Economopoulos**; Chochos, C. L.; Govaris, G. K.; Yiannoulis, P.; Joannis K. Kallitsis Vasilis G. Gregoriou in *Materials for Photovoltaics*, edited by Michael Durstock, Daniel Friedman, Russell Gaudiana, and Angus Rockett  
*Materials Research Society Symposia Proceedings*, **2005**, 836, L5.16

**4. “Synthesis and Optical Properties on a Series of Polyethers Incorporating Terfluorene Segments and Methylene Spacers”**

Christos L. Chochos; Dionysia Papakonstandopoulou; **Solon P. Economopoulos**; Vasilis G. Gregoriou; Joannis K. Kallitsis

*Journal of Macromolecular Science, Part A: Pure and Applied Chemistry*, **2006**, *43*, 419

**5. “Synthesis of Soluble Main - Chain Poly(Quinolines)”**

**Solon P. Economopoulos**; Aikaterini K. Andreopoulou; Vasilis G. Gregoriou; Joannis K. Kallitsis

*Journal of Macromolecular Science, Part A: Pure and Applied Chemistry*, **2006**, *43*, 977

**6. “Synthesis and Characterization of New Rod-Coil Block and Random Copolymers Combining Terfluorene Segments and Hole or Electron Transporting Moieties”**

Christos L. Chochos; Nikos P. Tzanetos; **Solon P. Economopoulos**; Vasilis G. Gregoriou; Joannis K. Kallitsis

*Journal of Macromolecular Science, Part A: Pure and Applied Chemistry*, **2007**, *44*, 923

**7. “Novel brush-type copolymers bearing thiophene backbone and side chain quinoline blocks. Synthesis and their use as a compatibilizer in thiophene-quinoline polymer blends”**

**Solon P. Economopoulos**; Christos L. Chochos; Vasilis G. Gregoriou; Joannis K. Kallitsis; Sophie Barrau; Georges Hadziioannou

*Macromolecules*, **2007**, *40*, 921

**8. “Synthesis of a Soluble n-Type Cyano Substituted Polythiophene Derivative: A Potential Electron Acceptor in Polymeric Solar Cells”.**

Christos L. Chochos, **Solon P. Economopoulos**, Valadoula Deimede, Vasilis G. Gregoriou, Matthew T. Lloyd, George G. Malliaras, Joannis K. Kallitsis

*The Journal of Physical Chemistry C*, **2007**, *111*, 10732

**9. “New Rod – Coil Block Copolymers Consisting of Terfluorene Segments and Electron Transporting Units as the Flexible Blocks”**

Christos L. Chochos, Nikos P. Tzanetos, **Solon P. Economopoulos**, Vasilis G. Gregoriou, Joannis K. Kallitsis

*European Polymer Journal*, **2007**, *43*, 5065

**10. "Photoinduced electron transfer in aqueous carbon nanotube/block copolymer/CdS hybrids: Application in the construction of photoelectrochemical cells."**

Grigoris Mountrichas; Atula S. D. Sandanayaka; **Solon P. Economopoulos**; Stergios Pispas; Osamu Ito; Taku Hasobe; Nikos Tagmatarchis

*Journal of Materials Chemistry*, **2009**, *19*, 8990

**11. "Solvent-free microwave-assisted Bingel reaction in carbon nanohorns"**

**Solon P. Economopoulos**; Georgia Pagona; Masako Yudasaka; Sumio Iijima; Nikos Tagmatarchis

*Journal of Materials Chemistry*, **2009**, *19*, 7326

**12. "Polymer and Hybrid Electron Accepting Materials Based on a Semiconducting Perfluorophenylquinoline"**

Andreas A. Stefopoulos; Souzana N. Kourkouli; **Solon Economopoulos**; Fotini Ravani; Aikaterini Andreopoulou; Kostas Papagelis; Angeliki Siokou; Joannis K. Kallitsis

*Macromolecules*, **2010**, *43*, 4827

**13. "Porphyrin counter anion in imidazolium-modified graphene-oxide"**

Nikolaos Karousis; **Solon P. Economopoulos**; Evangelia Sarantopoulou; Nikos Tagmatarchis

*Carbon*, **2010**, *48*, 854

**14. "Fullerene-coumarin dyad as selective metal receptor. Synthesis, photophysical properties, electrochemistry and ion binding studies."**

Georgia Pagona; **Solon P. Economopoulos**; George K. Tsikalas; Haralambos E. Katerinopoulos; Nikos Tagmatarchis

*Chemistry - A European Journal*, **2010**, *16*, 11969

**15. “Molecular recognition of La@C82 endohedral metallofullerene by an isophthaloyl-bridged porphyrin dimer”**

Georgia Pagona; Solon P. Economopoulos; Takayuki Aono; Yasumitsu Miyata; Hisanori Shinohara; Nikos Tagmatarchis

*Tetrahedron Letters*, **2010**, *51*, 5896

**16. “Microwave assisted covalent functionalization of C60@SWCNT peapods”**

Nikolaos Karousis; Solon P. Economopoulos; Yoko Iizumi; Toshiya Okazaki; Zheng Liu; Kazu Suenaga; Nikos Tagmatarchis

*Chemical Communications*, **2010**, *46*, 9110

**17. “Exfoliation and chemical modification using microwave irradiation affording highly functionalized graphene”**

Solon P. Economopoulos; Georgios Rotas; Yasumitsu Miyata; Hisanori Shinohara; Nikos Tagmatarchis

*ACS Nano*, **2010**, *4*, 7499

**18. “Graphene Oxide with Covalently Linked Porphyrin Antennae: Synthesis, Characterization and Photophysical Properties”**

Nikolaos Karousis; Atula S. D. Sandanayaka; Taku Hasobe; Solon P. Economopoulos; Evangelia Sarantopoulou; Nikos Tagmatarchis

*Journal of Materials Chemistry*, **2011**, *21*, 109

**19. “Microwave-assisted functionalization of carbon nanostructured materials”**

Solon P. Economopoulos; Nikolaos Karousis; Georgios Rotas; Georgia Pagona; Nikos Tagmatarchis

Review Article; *Current Organic Chemistry*, **2011**, *15*, 1121

**20. “2-(2,3,4,5,6-Pentafluorophenyl)-1H-benzo[d]imidazole, a fluorine-rich building block for the preparation of conjugated polymer donors for organic solar cell applications”**

Marios Neophytou, Heraklidia A. Ioannidou, Theodosia A. Ioannou, Christos L. Chochos, **Solon P. Economopoulos**, Panayiotis A. Koutentis, Grigorios Itskos and Stelios A. Choulis

*Polymer Chemistry*, **2012**,3, 2236

**21. “New hybrid materials with porphyrin-ferrocene and porphyrin-pyrene covalently linked to single-walled carbon nanotubes”**

**Solon Economopoulos**, Angeliki Skondra, Kalliopi Ladomenou, Nikolaos Karousis, Georgios Charalambidis, Athanassios G Coutsolelos and Nikos Tagmatarchis

*RSC Advances*, **2013**, 3, 5539-5546

**22. “Identifying potential candidates for donor–acceptor copolymers on a series of 4H-1,2,6-thiadiazines: An electrochemical approach”**

**Solon P. Economopoulos**, Panayiotis A. Koutentis, Heraklidia A. Ioannidou, and Stelios A. Choulis,

*Electrochimica Acta*, **2013**, 107, 448.

**23. “Novel BODIPY-based conjugated polymers donors for organic photovoltaic applications”**

**Solon P. Economopoulos**, Christos L. Chochos, Heraklidia A. Ioannidou, Marios Neophytou, Charilaos Charilaou, Georgia A. Zissimou, Jarvist Moore Frost, Tuladhar Sachetan, Munazza Shahid, Jenny Nelson, Martin Heeney, Donal D. C. Bradley, Grigorios Itskos, Panayiotis A. Koutentis, and Stelios A. Choulis.

*RSC Advances*, **2013**, 3, 10221

**24. “Size-Dependent Charge Transfer in Blends of PbS Quantum Dots with a Low-Gap Silicon-Bridged Copolymer”**

Grigorios Itskos, Paris Papagiorgis, Demetra Tsokkou, Andreas Othonos, Felix Hermerschmidt, **Solon P. Economopoulos**, Maksym Yarema, Wolfgang Heiss, and Stelios Choulis.

*Advanced Energy Materials*, DOI: 10.1002/aenm.201300317

**25. “Chemical Functionalization of Exfoliated Graphene”**

**Solon P. Economopoulos** and Nikos Tagmatarchis\*

*Chemistry – A European Journal* **2013**, *19*, 12930-12936.

## **Participations in Conferences**

**1. “Synthesis and Characterization of Conjugated Polymers and Their Mixtures for Opto-electronic Applications”**

Gregoriou, V. G.; **Economopoulos, S. P.**; Govaris, G. K.; Chochos, C. L.; Andreopoulou, K.; Kallitsis, J. K.; Yiannoulis, P.,  
1<sup>st</sup> National Plastics Conference, Athens, Hellas. March 2003.

**2. “Synthesis and Characterization of Conjugated Polymers and Their Mixtures for Opto-electronic Applications”**

Gregoriou, V. G.; Govaris, G. K.; Chochos, C. L.; **Economopoulos, S. P.**; Andreopoulou, K.; Kallitsis, J. K.; Yiannoulis, P.,  
4<sup>th</sup> Greek National Chemical Engineering Conference, Patras, Hellas. May 2003.

**3. “Synthesis and Characterization of Conjugated Polymers and their Blends for Optoelectronic Applications”**

**Economopoulos, S. P.**; Govaris, G. K.; Chochos, C. L.; Andreopoulou, A. K.; Tzanetos, N.; Kallitsis, J. K.; Yiannoulis, P.; Gregoriou, V. G.,  
15<sup>th</sup> European Symposium on Polymer Spectroscopy ESOPS 15, Heraklion, Hellas. June 2003.

**4. “Characterization of conjugated polymers and their blends for use in flexible photovoltaic cells”**

Gregoriou, V. G.; **Economopoulos, S. P.**; Govaris, G. K.; Chochos, C. L.; Andreopoulou, A. K.; Tzanetos, N.; Kallitsis, J. K.; Yiannoulis, P.,  
Pittsburgh Conference in Analytical Chemistry and Applied Spectroscopy, Chicago, IL, USA. March 2004.

**5. “Bulk Heterojunction Photovoltaic Cells From Polymer Mixtures and Copolymers Utilizing Oxadiazoles and Quinolines as Electron Acceptors”**

Gregoriou, V. G.; Chochos, C. L.; **Economopoulos, S. P.**; Govaris, G. K.; Andreopoulou, A. K.; Tzanetos, N. P.; Deimede, V.; Kallitsis, J. K.; Yiannoulis, P.,

6<sup>th</sup> International Symposium on Functional pi-Electron Systems, Cornell, NY, USA. June 2004.

6. *“Polymer blends for Use in Plastic Photovoltaic Cells; Study and Correlation between Morphology and Efficiency”*

**Economopoulos, S. P.**; Chochos, C. L.; Govaris, G. K.; Andreopoulou, K.; Mouzakis, D. E.; Yiannoulis, P.; Kallitsis, J. K.; Gregoriou, V. G.,  
5<sup>th</sup> Greek National Chemical Engineering Conference, Thessaloniki, Hellas. May 2005.

7. *“Bulk Heterojunction Polymer blends for use in Plastic Photovoltaic Cells. Study and Correlation of the Observed Morphology and the Energy Efficiency of the Photovoltaic Devices ”*

**Economopoulos, S. P.**; Chochos, C. L.; Govaris, G. K.; Andreopoulou, K.; Mouzakis, D. E.; Yiannoulis, P.; Kallitsis, J. K.; Gregoriou, V. G.  
2<sup>nd</sup> National Plastics Conference, Athens, Hellas. March 2005.

8. *“Synthesis and Spectroscopic Characterization of Stable Blue Emitters Based on Rod-Coil Block Copolymers Incorporating Terfluorene Segments for PLED applications”*

Chochos, C. L.; Tzanetos, N. P.; **Economopoulos, S. P.**; Kallitsis, J. K.; Gregoriou, V. G.,  
16<sup>th</sup> European Symposium on Polymer Spectroscopy ESOPS 16, Kerkrade, the Netherlands. May 2005.

9. *“Bulk Heterojunction Photovoltaic Cells from Polymer Mixtures with Soluble Oxadiazole and Quinoline Polymers as Electron Acceptors”*

**Economopoulos, S. P.**; Chochos, C. L.; Govaris, G. K.; Yiannoulis, P.; Kallitsis, J. K.; Gregoriou, V. G.,  
16<sup>th</sup> European Symposium on Polymer Spectroscopy ESOPS 16, Kerkrade, the Netherlands. May 2005.

10. *“Synthesis and Characterization of Conjugated Polymers and their Blends for Optoelectronic Applications ”*

**Economopoulos, S. P.**; Govaris, G. K.; Chochos, C. L.; Andreopoulou, K.; Yiannoulis, P.; Kallitsis, J. K.; Gregoriou, V. G.



19<sup>o</sup> Panhellenic Chemistry Conference, Crete, November 2002

**11. “Functionalization of Single Wall Carbon Nanotubes via Covalent Attachment of Porphyrine Moieties.”**

**Economopoulos S.**, Karousis N., Coutsolelos A.G., Tagmatarchis N  
XXIV Panhellenic Conference on Solid State Physics and material Science,  
Fodele, Hellas September 2008

**12. "New Conjugated Polymers and Brush-type Copolymers for Use in All Polymer Solar Cells"**

Chochos C.L., **Economopoulos S.P.**, Andreopoulou A.K., Lloyd M.T., Malliaras G.,  
Barrau S., Hadziioannou G., Georgiou V.G., Kallitsis J.K.,  
*"1st International Symposium on Organic Electronics"*, Halkidiki, Hellas July 2008

**13. “Solvent-free Microwave-assisted functionalization of Carbon Nanohorns”**

**Economopoulos, S. P.**; Tagmatarchis, N.  
Cnano ‘09 International Conference on Carbon Nanostructured Materials, Santorini,  
Hellas October 2009

**14. “Multifunctional carbon-based nanostructured materials: Fullerenes, azafullerenes, nanotubes, nanohorns, peapods and graphene”**

Karousis, N.; Rotas, G.; **Economopoulos, S.P.**; Pagona, G.; Tagmatarchis, N.  
Nanotp – Scientific First Meeting, COST Action MP0901 Bessy II, Berlin, Germany  
March 2010

**15. “Functionalization and solubilization of Carbon Nanohorns using microwave irradiation”**

**Economopoulos, S. P.**; Tagmatarchis, N.  
10<sup>th</sup> Greek-Cyprus Chemistry Conference, Heraklion, Hellas July 2009

**16. “Efficient exfoliation and covalent functionalization of graphene “**

**Economopoulos, S.P.**; Karousis, N.; Rotas, G.; Tagmatarchis, N.

MAM-10: 5th IUPAC-Sponsored International Symposium on Macro- and Supramolecular Architectures and Materials: New Science and Technologies for the Improvement of Human Living Standards  
Ocho Rios, Jamaica, 15-20 August 2010

**17. “Microwave-Assisted functionalization of exfoliated graphene”**

**Economopoulos, S.P.;** Rotas, G.; Tagmatarchis, N.

FSAS 2010 Fullerene Silver Anniversary Symposium, Hersonissos, Crete, 4-10 October 2010

**18. “Covalent Functionalization of Carbon Nanohorns employing microwave-assisted chemistry”**

**Economopoulos, S. P.;** Tagmatarchis, N.

FSAS 2010 Fullerene Silver Anniversary Symposium, Hersonissos, Crete, 4-10 October 2010

**19. “Efficient Functionalization of Carbon Nanostructures using microwave irradiation”**

**Economopoulos, S. P.;** Choulis, S.A.; Tagmatarchis, N.

Organic Electronics and Applications Summer School, Chania, Crete  
Limassol, Cyprus, 18-21 September 2011

**20. “Investigation of energy levels on novel conjugated electron donor polymers for organic solar cells”**

**Economopoulos, S. P.;** Chochos, C.L.; Choulis, S.A.

XXVII Panhellenic Conference on Solid State Physics and material Science, Limassol, Cyprus, 18-21 September 2011

**21. “Functionalization of exfoliated graphene”**

**Economopoulos, S.P.**

NT12 Thirteenth International Conference on the Science and Application of Nanotubes, Brisbane Convention & Exhibition Centre, Australia, 24–29 June 2012

**22. “Efficient solubilization and functionalization of graphene”**

**Economopoulos, S. P.**, Rotas, G.; Choulis, S. A.; Tagmatarchis N.

GrapHEL. A European Conference/Workshop on the Synthesis, Characterization and Applications of Graphene, Mykonos, Greece, 27-30 September 2012

**23. “On the impact of graphene in organic solar cells”**

**Economopoulos, S. P.**; Giannouli, M.; Savva, A.; Tagmatarchis, N.; Choulis, S.A.

GrapHEL. A European Conference/Workshop on the Synthesis, Characterization and Applications of Graphene, Mykonos, Greece, 27-30 September 2012