

# Artem A. Bakulin

Department of Chemistry  
Imperial College London  
London SW7 2AZ, UK

e-mail: [a.bakulin@imperial.ac.uk](mailto:a.bakulin@imperial.ac.uk)  
Tel: +44 (0) 20 759 40727

## Work experience

- Apr 2016 - **Royal Society University Research Fellow**  
**Chemistry Department, Imperial College London, UK**
- 2014-2016 **Royal Society University Research Fellow**  
**Physics Department, University of Cambridge, UK**
- 2012-2014 **Postdoctoral researcher, Veni fellow (NWO)**  
**FOM institute AMOLF, Amsterdam, The Netherlands**  
Supervisor Prof. H.J. Bakker
- ultrafast IR spectroscopy of molecular, quantum dot, and hybrid materials and electronic devices
- 2010 – 2012 **Research Associate, Rubicon fellow (NWO & Marie Curie)**  
**University of Cambridge, UK**  
Supervisor Prof. Sir R. H. Friend
- photophysics of organic and hybrid electronic devices

## Education

- 2005-2009 **PhD** in Physical Chemistry  
**University of Groningen, The Netherlands**
- 2DIR spectroscopy of hydrogen bond dynamics
  - charge and energy transfer in organic semiconductors
- Supervisors: Prof. D. A. Wiersma, Dr. M. S. Pshenichnikov  
and Prof. P. H. M. van Loosdrecht
- 1999-2005 **B.Sc., M.Sc. in Physics and High-Technology Management**  
**Moscow State University, Russia**
- Research project on modelling of laser-induced plasma generation
  - Diploma work on nonlinear spectroscopy of conjugated polymers
- Supervisor: Dr. D. Yu. Paraschuk
- 1996-1999 **Moscow Chemical Lyceum** (Moscow top chemical high school)

## Industry Experience

- 2004 **Internship in Schlumberger R&D Center**, Moscow, Russia  
Analysis of fiber-optics applications for oil&gas pipe monitoring
- 2004 **Internship in RusAl R&D Center**, Krasnoyarsk, Russia  
Drafting a development project for KRAZ aluminum plant
- 2003 **Internship in Sensa-Schlumberger**, Southampton, UK  
Simulating optical-fiber pressure sensors for oil&gas drilling facilities

## Awards/Personal Grants

- 2017 Japanese Society for Promotion of Science **JSPS Visiting Research Fellowship**
- 2015 **ERC Starting Grant** (1.5M euro)
- 2014 **Royal Society University Research Fellowship** (~500k£)
- 2012 **Veni fellowship** from Netherlands Organization for Scientific Research - NWO (250k euro for 36 months research project)
- 2011 St. John's College (Cambridge) **post-doctoral membership**
- 2010 **Rubicon fellowship** from NWO and Marie Curie cofund action (96k euro for 16 months research project)
- 2005 **Ubbo Emmius sholarship** from University of Groningen  
The ~70k euro scholarship provided full support for my PhD studies
- 2004 **Lomonosov-2004** undergraduate-student conference: award for the best research project (top 5% out of ~300 participants)
- 1999 Award of **Moscow Physics Olympiad** for High-School Students (top 10% out of ~500 participants)
- 2006-2017 **6 travelling grants** for total amount of ~10k£  
(from Dutch-French institute, Dyansty fund, Ultrafast Phenomena, CMDS, Zernike Institute, LaserLab)

## Organization of Conferences and Research Meetings:

- 2017 Chair and local organizer of Royal Society International Research Seminar '*Low-energy structural and electronic dynamics in soft semiconducting materials*' Milton Keynes, Oct 2017
- 2017 Symposium Co-Chair '*Physical Chemistry of Nanomaterials and Interfaces*', SPIE Optics + Photonics, San Diego, Aug 2017
- 2017 Co-Chair of *Imperial Center for Plastic Electronics Symposium*, London June 2017
- 2016 Symposium Chair '*Physical Chemistry of Nanomaterials and Interfaces*', SPIE Optics + Photonics, San Diego, Aug 2016

## Teaching Experience

- 2016-now – Fellows teaching load (~20% of time) at Department of Chemistry, Imperial College London including lecturing, tutorials and lab demonstrations in Physical Chemistry.
- 2012-13 – undergraduate course (12-hour) on photovoltaics, University of Amsterdam
- 2005-2009 Tutoring optical practicum: University of Groningen, Moscow State University

## Artem Bakulin. List of Publications:

### Refereed journal publications:

1. Selig O., Sadhanala A., Müller C., Lovrincic R., Chen Z., Rezus Y.L., Frost J.M., Jansen T.L., and Bakulin A.A., Organic Cation Rotation and Immobilisation in Pure and Mixed Methylammonium Lead-Halide Perovskites, *JACS*, **139**, 4068 (2017)
2. Kan. B., Zhang J., Liu F., Wan X., Li C., Ke X., Wang Y., Feng H., Zhang Y., Long G., Friend R.H., Bakulin A.A., Chen Y., Fine-Tuning the Energy Levels of a Nonfullerene Small-Molecule Acceptor to Achieve a High Short-Circuit Current and a Power Conversion Efficiency over 12% in Organic Solar Cells, *Advanced Materials*, 1704904 (2017)
3. Zhang J., Jakowetz A., Li G., Di D., Menke S.M., Rao A., Friend R.H. and Bakulin A.A., On the Energetics of Bound Charge-Transfer States in Organic Photovoltaics, *J. Mat. Chem. A*, **5**, 11949 (2017)
4. Lami V., Leibold D., Fassel P., Hofstetter Y.J., Becker-Koch D., Biegger P., Paulus F., Hopkinson P.E., Adams M., Bunz U.H.F., Huettner S., Howard I., Bakulin A.A., Vaynzof Y., N-Heteroacenes as a New Class of Non-Fullerene Electron Acceptors for Organic Bulk-Heterojunction Photovoltaic Devices, *Solar RRL*, **1**, 1700053 (2017)
5. Bakulin A.A., Morgan S.E., Kehoe T.B., Wilson M.B., Chin A., Zigmantas D., Egorova D., Rao A., Real-Time Observation of Multiexcitonic States in Ultrafast Singlet Fission Using Coherent 2D Electronic Spectroscopy, *Nature Chemistry*, **8**, 16 (2016)
6. Bakulin A.A., Silva C., Vella E., Ultrafast Spectroscopy with Photocurrent Detection: Watching Excitonic Optoelectronic Systems at Work, *J. Phys. Chem. Lett.*, **7**, 250 (2016)
7. Jakowetz A.C., Böhm M.L., Zhang J., Sadhanala A., Huettner S., Bakulin A.A., Rao A., Friend R.H., What Controls the Rate of Ultrafast Charge Transfer and Charge Separation Efficiency in Organic Photovoltaic Blends, *JACS*, **138**, 11672 (2016)
8. Hofstetter Y.J., Hopkinson P., Bakulin A.A., Vaynzof Y., Simultaneous enhancement in open circuit voltage and short circuit current of hybrid organic–inorganic photovoltaics by inorganic interfacial modification, *J. Mater. Chem. C*, **4**, 1111 (2016)
9. Sevinchan Y., Hopkinson P.E., Bakulin A.A., Herz J., Motzkus M., Vaynzof Y., Improving Charge Separation across a Hybrid Oxide/Polymer Interface by Cs Doping of the Metal Oxide, *Adv. Mater. Interfaces*, 1500616 (2016)
10. Bakulin A.A., Xia Y., Bakker H.J., Inganäs O., Gao F., Morphology, Temperature, and Field Dependence of Charge Separation in High-Efficiency Solar Cells Based on Alternating Polyquinoxaline Copolymer, *J. Phys. Chem. C*, **120**, 4219 (2016)
11. Bakulin A.A., Selig O., Bakker H.J., Rezus Y.L.A., Müller C., Glaser T., Lovrincic L., Sun Z., Chen Z., Walsh A., Frost J.M., Jansen T.L.C., Real-Time Observation of Organic Cation Reorientation in Methylammonium Lead Iodide Perovskites, *J Phys. Chem. Lett.*, **6**, 3663 (2015)
12. Rabouw F.T., Vaxenburg R., Bakulin A.A., van Dijk-Moes R.J.A., Bakker H.J., Rodina A., Lifshitz E., Efros A.L., Koenderink A.F., Vanmaekelbergh D., Dynamics of Intraband and Interband Auger Processes in Colloidal Core–Shell Quantum Dots, *ACS Nano*, **9**, 10366 (2015)
13. Müller C., Glaser T., Plogmeyer M., Sendner M., Döring S., Bakulin A.A., Brzuska C., Scheer R., Pshenichnikov M.S., Kowalsky W., Pucci A., Lovrinčić R., Water Infiltration in Methylammonium Lead Iodide Perovskite: Fast and Inconspicuous, *Chem. Mater.*, **27**, 7835 (2015)
14. Böhm M.L., Jellicoe T.C., Tabachnyk M., Davis N.J.L.K., Wisnivesky-Rocca-Rivarola F., Ducati K., Ehrler B., Bakulin A.A., Greenham N.C., Lead Telluride Quantum Dot Solar Cells Displaying External Quantum Efficiencies Exceeding 120%, *Nano Lett.*, **15**, 7987 (2015)
15. Bakulin A.A., Lovrincic R., Yu X., Selig O., Bakker H.J., Rezus Y.L.A., Nayak P.K., Fonari A., Coropceanu V., Brédas J.-L., Cahen D., Mode-selective vibrational modulation of charge transport in organic electronic devices, *Nature Communications*, **6**:7880 (2015)

16. Sun Z., Stibon G., Pons T., Bakulin A.A., Chen Z., Reduced Carrier Recombination in PbS-CuInS<sub>2</sub> Quantum Dot Solar Cells, *Scientific Reports* **5**, 10626 (2015).
17. Savoie B.M., Rao A., Bakulin A.A., Gelinas S., Movaghar B., Friend R.H., Marks T.J., Ratner M.A., Unequal Partnership: Asymmetric Roles of Polymeric Donor and Fullerene Acceptor in Generating Free Charge, *JACS* **136**, 2876 (2014)
18. Mangold H., Bakulin A.A., Howard I.A., Kästner C., Egbe D.A.M., Hoppe H., Control of charge generation and recombination in ternary polymer/polymer: fullerene photovoltaic blends using amorphous and semi-crystalline copolymers as donors, *Phys. Chem. Chem. Phys.* **16**, 20329 (2014)
19. Pachoumi O., Bakulin A.A., Sadhanala A., Siringhaus H., Friend R.H., and Vaynzof Y., Improved Performance of ZnO/Polymer Hybrid Photovoltaic Devices by Combining Metal Oxide Doping and Interfacial Modification, *J. Phys. Chem. C* **118**, 18945 (2014)
20. Bakulin A.A., Neutzner S., Bakker H.J., Ottaviani L., Barakel D., Chen Z., Charge Trapping Dynamics in PbS Colloidal Quantum Dot Photovoltaic Devices, *ACS Nano* **7**, 8771 (2013)
21. Bakulin A.A., Cringus D., Pieniazek P.A., Skinner J.L., Jansen T.L.C., Pshenichnikov M.S., Dynamics of Water Confined in Reversed Micelles: Multidimensional Vibrational Spectroscopy Study, *J. Phys. Chem. B* **117**, 15545 (2013)
22. Tan Z.-K., Johnson K., Vaynzof Y., Bakulin A.A., Chua L.-L., Ho P.K.H., Friend R.H., Suppressing Recombination in Polymer Photovoltaic Devices via Energy Cascades, *Adv. Mater.* **25**, 4131 (2013)
23. Bakulin A.A., Dimitrov S.D., Rao A., Chow P.C.Y., Nielsen C.B., Schroeder B.C., McCulloch I., Bakker H.J., Durrant J.R., Friend R.H., Charge-Transfer State Dynamics Following Hole and Electron Transfer in Organic Photovoltaic Devices, *J. Phys. Chem. Lett.* **4**, 209 (2013)
24. Kumar A., Pace G., Bakulin A.A., Fang J., Ho P.K.H., Huck W.T.S., Friend R.H., Greenham N.C., Donor–Acceptor Interface Modification by Zwitterionic Conjugated Polyelectrolytes in Polymer Photovoltaics, *Energy Environ. Sci.* **6**, 1589 (2013)
25. Dimitrov S.D., Bakulin A.A., Nielsen C.B., Schroeder B.C., Du J., Bronstein H., McCulloch I., Friend R.H., Durrant J.R., On the Energetic Dependence of Charge Separation in Polymer/Fullerene Blends, *J. Am. Chem. Soc.* **134**, 18189 (2012)
26. Vaynzof Y.,\* Bakulin A. A.,\* Gelinas S., Friend R. H., Direct Observation of Photoinduced Charge-Transfer States at Organic-Inorganic Interface, *Phys. Rev. Lett.* **108**, 246605 (2012) (\*-equal cont.)
27. Bakulin A. A., Rao A., Paveleyev V., van Loosdrecht P. H. M., Pshenichnikov M. S., Niedzialek D., Cornil J., Beljonne D., Friend R. H., The Role of Driving Energy and Delocalised States for Charge Separation in Organic Semiconductors, *Science* **335**, 1340 (2012)
28. Bakulin, A.A., Pshenichnikov M.S., Reduced Intermolecular Coupling and Rotational Mobility of Water at the Lipid-like Interface, *Phys.Chem.Chem.Phys.*, **13**, 19355 (2011)
29. Bakulin, A.A., Bakker, H.J., Petersen, C., Pshenichnikov, M.S., Hydrophobic Molecules Slow Down the Hydrogen-Bond Dynamics of Water, *J. Phys. Chem. A*, **115**, 1821 (2011)
30. Petersen, C., Bakulin, A.A., Paveleyev V., Pshenichnikov, M.S., Bakker, H.J., Femtosecond Mid-Infrared Study of Aggregation Behaviour in Alcohol Solutions, *J. Chem. Phys.*, **133**, 164514 (2010)
31. Bakulin, A. A., Hummelen, J. C., Pshenichnikov, M. S., van Loosdrecht, P. H. M. Hole-Transfer Dynamics in MDMO-PPV/PCBM Bulk Heterojunction. *Adv. Funct. Mater.*, **20**, 1653 (2010)
32. Bakulin, A. A., Martianov, D. S., Pshenichnikov, M. S., van Loosdrecht, P. H. M., Paraschuk, D. Y. Charge Transfer Complexes of Conjugated Polymers as Intermediates for Organic Photovoltaics. *Chem. Phys. Lett.*, **482**, 99 (2009)
33. Bakulin, A. A., Liang, C., Jansen, T. I. C., Wiersma, D. A., Bakker, H. J., Pshenichnikov, M. S. The Hydrophobic Hydration: a 2D IR Spectroscopy Inquest. *Acc.of Chem. Res.*, **42**, 1229 (2009).

34. Bakulin, A. A., Zapunidy, S. A., Pshenichnikov, M. S., van Loosdrecht, P. H. M., Paraschuk, D. Y. Efficient Two-Step Photogeneration of Long-Lived Charges in Ground-State Charge-Transfer Complexes of MEH-PPV Doped with Fullerene. *Phys.Chem.Chem.Phys.*, **11**, 7324 (2009)
35. Piris, J., Dykstra, T. E., Bakulin, A. A., van Loosdrecht, P. H. M., Knulst, W., Trinh M.T., Schins, J.M., Siebbeles, L.D.A., Photogeneration and Ultrafast Dynamics of Excitons and Charges in P3HT/PCBM Blends. *J. Phys. Chem. C* **113**, 14500 (2009)
36. Bakulin, A. A., Paraschuk, D. Y. van Loosdrecht, P. H. M., Pshenichnikov, M. S., Ultrafast polarization spectroscopy of photoinduced charges in a conjugated polymer. *Quantum Electronics* **39**, 643 (2009)
37. Bakulin, A. A., Martyanov, D. S., Paraschuk, D. Y., Pshenichnikov, M. S. & van Loosdrecht, P. H. M., Ultrafast charge photogeneration dynamics in ground-state charge-transfer complexes based on conjugated polymers. *J. Phys. Chem. B* **112**, 13730 (2008).
38. Golovnin, I.V., Bakulin, A. A., Zapunidy, S. A., Nechvolodova, E. M. & Paraschuk, D. Y. Dramatic enhancement of photooxidation stability of a conjugated polymer in blends with organic acceptor. *Appl. Phys. Lett.* **92**, 243311 (2008).
39. Cringus, D., Bakulin, A., Lindner, J., Vohringer, P., Pshenichnikov, M. S. & Wiersma, D. A. Ultrafast energy transfer in water-AOT reverse micelles. *J. Phys. Chem. B* **111**, 14193 (2007).
40. Arnautov, S. A., Nechvolodova, E. M., Bakulin, A. A., Elizarov, S. G., Khodarev, A. N., Martyanov, D. S. & Parashchuk, D. Y. Influence of preparation procedure on optical properties of conjugated-polymer thin films. *Polymer Science Series A* **47**, 711 (2005).
41. Bakulin, A.A., Elizarov, S.G., Khodarev, A., Martyanov, D.S., Golovnin, I., Paraschuk, D.Y., Triebel, M.M., Tolstov, I., Frankevich, E.L., Arnautov, S.A., Nechvolodova, E.M. Weak charge-transfer complexes based on conjugated polymers for plastic solar cells. *Synthetic Metals* **147**, 221 (2004).
42. Bakulin, A. A., Khodarev, A. N., Martyanov, D. S., Elizarov, S. G., Golovnin, I. V., Paraschuk, D. Y., Arnautov, S. A. & Nechvolodova, E. M. Charge transfer complexes of a conjugated polymer. *Doklady Chemistry* **398**, 204 (2004).
43. Arnautov, S. A., Nechvolodova, E. M., Bakulin, A. A., Elizarov, S. G., Khodarev, A., Martyanov, D. S. & Paraschuk, D. Y. Properties of MEH-PPV films prepared by slow solvent evaporation. *Synthetic Metals* **147**, 287 (2004).

#### **Refereed book chapters and conference publications:**

1. Bakulin A.A., Morgan S.E., Alster J., Egorova D., Chin A., Zigmantas D., Rao A., Vibrational Coherence Reveals the Role of Dark Multiexciton States in Ultrafast Singlet Exciton Fission, *Ultrafast Phenomena XIX*, v.162 *Springer Proceedings in Physics*, 226 (2015)
2. Bakulin A.A., Lovrincic R., Rao A., Gelinias S., Xi Y., Selig O., Chen Z., Friend R.H., Bakker H.J., Cahen D., Ultrafast Optical Control of Charge Dynamics in Organic and Hybrid Electronic Nanodevices, *Ultrafast Phenomena XIX*, v.162 *Springer Proceedings in Physics*, 675 (2015)
3. Bakulin A.A., Bakker H.J., Sun Z., Chen Z., Ultrafast infrared spectroscopy reveals intragap states in methylammonium lead iodide perovskite materials, *SPIE NanoScience+ Eng*, 91650U-91650U-5 (2014)
4. Bakulin A.A., Rao A., Vaynzof Y., Gelinias S., Pavelyev V.G., van Loosdrecht P.H.M., Pshenichnikov M.S., Niedzialek D., Cornil J., Beljonne D., Friend R.H., Ultrafast Photocurrent Spectroscopy of Organic Photoconversion Systems, *EPJ Web of Conf.* v.41, *Ultrafast Phenomena XVIII* (2013)
5. Bakulin, A.A., Petersen, C., Bakker, H.J., & Pshenichnikov, M.S. Does Hydrophobic Surrounding Affect Water Dynamics? *Ultrafast Phenomena XVII*, Springer Berlin (2011)
6. Bakulin, A. A., Hummelen, J. C., Pshenichnikov, M. S. & van Loosdrecht, P. H. M. 30-fs Hole-Transfer Dynamics in Polymer/PCBM Bulk Heterojunction, *Ultrafast Phenomena XVII*, Springer Berlin (2011)

7. Bakulin, A.A., Pshenichnikov, M. S., van Loosdrecht, P. H. M., Golovnin, I. V. & Paraschuk, D. Y. Conjugated polymer charge-transfer complexes: a new route to low-bandgap photostable materials. Chapter 16 of 'Physics of nanostructured solar cell', Nova (2010)
8. Bakulin A.A., Paraschuk D.Yu., Pshenichnikov M.S., van Loosdrecht P.H.M., Ultrafast Charge Photogeneration in PPV Charge-Transfer Complexes, Ultrafast Phenomena XVI, Springer Berlin (2009)
9. Bakulin, A.A., Cringus D., Wiersma, D. A., & Pshenichnikov, M. S., Frozen Dynamics and Insulation of Water at the Lipid Interface, Ultrafast Phenomena XVI, Springer Berlin (2009)

### **Selected Presented Talks:**

1. Royal Society International Research Seminar, Milton Keynes, Oct 2017
2. Marie-Curie Training Network Seminar, Sep 2017, Oxford (**invited**)
3. Time-Resolved Vibrational Spectroscopy, June 2017, Cambridge UK (**invited**)
4. ICMAT-2017, June 2017, Singapore (**invited**)
5. CPE Symposium, June 2017, London UK (**invited**)
6. E-MRS, May 2017, Strasbourg France (**invited**)
7. Spectroscopy and Dynamics of Photoinduced Excitations, May 2017, Trieste Italy (**invited**)
8. JSPS Invitation Fellowship lecture series (3 lectures), April 2017, Japan
9. University of Bath Physics Seminar, March 2017, Bath UK (**invited**)
10. Center for Plastic Electronics Winter School, Jan 2017, Bergen Switzerland (**invited**)
11. ICL Hybrid Perovskite Symposium, Nov 2016, London UK (**invited**)
12. London Center for Nanotechnology Seminar, Nov 2016, London UK (**invited**)
13. Advanced Materials for Organic Photovoltaics, Sep 2016, Bukhara Uzbekistan (**invited**)
14. Fall School on Organic Electronics, Sep 2016, Moscow region, Russia (**invited**)
15. Symposium on Emerging Concepts in Photovoltaic, Sep 2016, London UK (**invited**)
16. New appointees in Physical Chemistry meeting, Sep 2016, Manchester UK (**invited**)
17. SPIE Optics&Photonics, August 2016, San Diego, US
18. CMDS conference, June 2016, Groningen, NL (**invited**)
19. ICL Center for Plastic Electronics Trilateral meeting, May 2016, London UK (**invited**)
20. Quantsol meeting, March 2016, Raurus, Austria (**invited**)
21. Dutch AMO meeting, October 2015, Lunteren, the Netherlands, (**keynote**)
22. Optical Probes of Conjugated Polymers and Organic Nanostructures, June 2015, Hong Kong, China
23. Physics Seminar, June 2015, University of Heidelberg, Germany (**invited**)
24. Chemistry Seminar, May 2015, Imperial College London, UK
25. Lorentz Workshop: Good vibrations for Energy Management, March 2015, Leiden, NL (**invited**)
26. Fall School on Organic Electronics, September 2014, Moscow, Russia (**invited**)
27. SPIE meeting, August 2014, San Diego, US (**invited**)
28. Ultrafast Phenomena 2014, July 2014, Okinawa, Japan
29. Zernike Seminar, June 2014, University of Groningen, Netherlands (**invited**)
30. E-MRS, May 2014, Lille, France
31. Seminar, May 2014, Max Plank Inst. Polymer Research, Mainz, Germany (**invited**)
32. Physics Seminar, Nov 2013, TU Dresden, Germany (**invited**)
33. Chemistry Seminar, Oct 2013, U. Pierre& Marie Curie, Paris, France (**invited**)
34. Physics Seminar, Sep 2013, Durham, UK (**invited**)
35. Optical Probes Organic Mat., Jul 2013, Durham, UK (**invited**)
36. ICONO/LAT 2013, Jun 2013, Moscow, Russia (**invited**)
37. Next Generation Org. Photovoltaics, Jun 2013, Groningen, The Netherlands
38. TRVS 2013, May 2013, Beppu, Japan
39. Weizmann Institute Dep. Seminar, Apr 2013, Rehovot, Israel (**invited**)

40. Chemical Physics Seminar, Apr 2013, University of Lund, Sweden **(invited)**
41. Cavendish Colloquium, Feb 2013, University of Cambridge, UK **(invited)**
42. Physics Colloquium, Feb 2013, University of Hamburg, Germany **(invited)**
43. Physics Colloquium, Oct 2012, TU Graz, Austria **(invited)**
44. Bio-Physics Colloquium, Sep 2012, Free University, Netherlands **(invited)**
45. Physics Colloquium, Sep 2012, University of Potsdam, Germany **(invited)**
46. Excon 2012, Jun 2012, Groningen, The Netherlands
47. Ultrafast Phenomena 2012, Jun 2012, Lausanne, Switzerland **(invited)**
48. E-MRS 2012, May 2012 Strasbourg, France
49. Zernike seminar, Feb 2012, Groningen, The Netherlands **(invited)**
50. Theoretical Chemistry seminar, Oct 2011, Mons, Belgium **(invited)**
51. Photovoltaics at the Nanoscale, Oct 2011, Hasselt, Belgium **(invited)**
52. Max Planck Research School, Aug 2011, Cambridge, UK **(invited)**
53. IIT Seminar, May 2011, Milan, Italy **(invited)**
54. MRS-2011, Apr 2011, San Francisco, US
55. EMRS-2011, May 2011, Nice, France
56. Zernike Seminar, Sep 2010, Groningen, Netherlands **(invited)**
57. Vavilov Seminar, Sep 2010, Moscow, Russia **(invited)**
58. ICONO/LAT 2010, Aug 2010, Kazan, Russia **(invited)**
59. EUROMAT 09, Sep 2009, Glasgow, UK
60. OE seminar, Aug 2009, Cambridge, UK **(invited)**
61. TRVS XIV, May 2009, Meredith, US
62. Physics seminar, Apr 2009, University of Zurich, Switzerland **(invited)**
63. Chemical Physics seminar, Apr 2009, University of Lund, Sweden **(invited)**
64. CMDS iV, Aug 2008, Kyoto, Japan
65. Ultrafast Phenomena XVI, Jun 2008, Stresa, Italy
66. Optoelectronic Materials Seminar, Mar 2008, Delft, Netherlands **(invited)**
67. TRVS XIII, May 2007, Munich, Germany **(invited)**