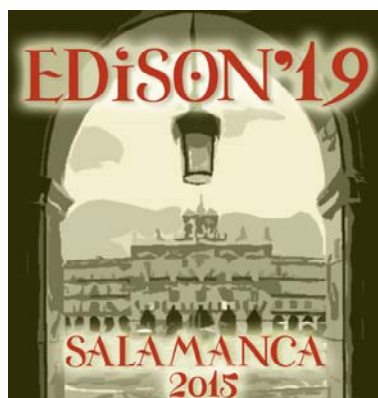




19th International Conference on Electron Dynamics in Semiconductors, Optoelectronics and Nanostructures (EDISON'19)

Hospedería Fonseca, Universidad de Salamanca

29 Junio - 2 Julio, 2015

<http://edison19.usal.es>

PROGRAMA PRELIMINAR

(5 DE Mayo de 2015)

	Sunday June 28	Monday June 29	Tuesday June 30	Wednesday July 1	Thursday July 2
8:30		Registration	Tu I. Ultrafast Optical Phenomena	Wed I. Novel materials and devices	Thu I. 2D and functional materials
9:00		Mo 0. Opening Session			Thu II. Non- equilibrium carrier dynamics-experimental
10:00		Coffee Break	Coffee Break	Coffee Break	Coffee Break
11:00		Mo I. Graphene I	Tu III. THz Spectroscopy	Wed II. Graphene II	Thu III. Non- equilibrium carrier dynamics- modelling
12:00		Mo I. Graphene I	Tu III. Carrier Dynamics in Energy Conversion		Thu IV. Bioelectronics
13:00		LUNCH	LUNCH	LUNCH	Closing Session
15:00		Mo III.A Terahertz		Wed III. A Quantum Computing	
16:00		Mo III.B Spintronics		Wed III. B Thermal Transport	
17:00		Coffee Break		Coffee Break	
18:00		Poster Session: Mo P	Excursion	Poster Session: Wed P	
19:00	Registration				
20:00	WELCOME RECEPTION			GALA DINNER	



28 June 2015, Sunday

19:00-20:30 *REGISTRATION*
 20:00 *WELCOME RECEPTION*

29 June 2015, Monday

8:30-9:00 *REGISTRATION*
 9:00 *OPENING SESSION*

Mo 0-1 **9:15-9:45** **Invited talk**
 M. Heiblum
Weizmann Institute of Science, Israel.
 Robust electron pairing in the integer quantum Hall effect regime

Mo 0-2 **9:45-10:15** **Invited talk**
 R. Miranda
IMDEA-Nanociencia and Universidad Autónoma de Madrid, Spain.
 Tailoring graphene for spintronics

10:15-10:45 *Coffee Break*

Session Mo I: GRAPHENE I

Mo I-1 10:45-11:00
 D. K. Ferry
Arizona State University, USA.
 Plasmon induced energy relaxation of hot carriers in graphene

Mo I-2 11:00-11:15
 H. Ramamoorthy¹, R. Somphonsane², J. Radice¹, and J. P. Bird¹
¹*University at Buffalo, USA.*
²*King Mongkut's Institute of Technology Ladkrabang, Thailand.*
 Transient electrical behaviour and energy dissipation in graphene transistors

Mo I-3 11:15-11:30
 J. M. Iglesias, M. J. Martin, R. Rengel, and E. Pascual
Universidad de Salamanca, Spain.
 A Monte Carlo study on the hot carrier relaxation dynamics in photoexcited graphene

Mo I-4 11:30-11:45
 V. Ryzhii¹, D. Svintsov², T. Otsuji¹, V. Mitin^{1,3}, and M. S. Shur⁴
¹*Tohoku University, Japan.* ²*Moscow Institute of Physics and Technology, Russia.*
³*University at Buffalo, USA.* ⁴*Rensselaer Polytechnic Institute Troy, USA.*
 Enhancement of terahertz gain in optically and electrically pumped graphene bilayers due to interband indirect transitions



Session Mo II. GRAPHENE DEVICES

- Mo II-1** 11:45- 12:00
M. Bauer¹, M. Andersson², A. Zak², P. Sakalas³, D. Čibiraite⁴, A. Lisauskas^{1,4}, M. Schröter³, J. Stake², and H. G. Roskos¹
¹Goethe-University Frankfurt, Germany. ²Chalmers University of Technology, Sweden.
³University Dresden, Germany. ⁴Vilnius University, Lithuania.
The potential for sensitivity enhancement by the thermoelectric effect in carbon-nanotube and graphene Tera-FETs
- Mo II-2** 12:00-12.15
S. Boubanga¹, D. Yadav¹, T. Watanabe¹, V. Ryzhii^{1,2}, and T. Otsuji¹
¹Tohoku University, Japan.
²Institute of Ultra-High-Frequency Semiconductor Electronics, Russia.
Terahertz emission in a double-graphene-layer heterostructure
- Mo II-3** 12:15-12.30
A. K. Singh^{1,2}, G. Auton³, E. Hill³, and A. Song¹
¹The University of Manchester, UK. ²PEC University of Technology, India.
³The University of Manchester, UK.
Graphene based ballistic nano-rectifiers
- Mo II-4** 12:30-12.45
C. Clendennen¹, N. Mori^{1,3}, and H. Tsuchiya^{2,3}
¹Osaka University, Japan. ²Kobe University, Japan.
³Japan Science and Technology Agency, Japan.
Comparative simulation study of graphene, silicene, and germanene nanoribbon FETs
- 12:45-15:00 LUNCH

Session Mo III.A. TERAHERTZ (parallel session)

- Mo III.A-1** 15:00-15-30 **Invited talk**
D. Jena
Cornell University, USA.
Paths for beyond 0.4 THz III-nitride electronics
- Mo III.A-2** 15:30-15.45
I. Kasalynas, R. Venckevičius, J. Laužadis, V. Jakštas, E. Širmulis, K. Požela, and G. Valušis
Center for Physical Sciences and Technology, Lithuania.
Efficient THz emission from the grating coupled AlGaIn/GaN heterostructure on sapphire substrate
- Mo III.A-3** 15:45-16:00
D. Daher¹, I. Iñiguez-de-la-Torre³, J. Torres¹, P. Nouvel¹, L. Varani¹, P. Sangare², B. Grimbert², M. Faucher², G. Ducournau², C. Gaquière², J. Mateos³, and T. González³
¹Université de Montpellier, France. ²Université de Lille 1, France.
³Universidad de Salamanca, Spain.
Room temperature terahertz heterodyne detection using unipolar nanodiodes



- Mo III.A-4** 16:00-16:15
Y. M. Meziani¹, S. Morozov², K. Maren'yanin², J. E. Velázquez¹, and K. Fobelets³
¹Salamanca University, Spain.
²Institute for Physics of Microstructures of Russian, Russia. ³Imperial College, UK.
Enhancement of sub-terahertz detection by drain-to-source biasing on strained silicon MODFET devices
- Mo III.A-5** 16:15-16:30
R. V. Morozov^{1,2}, V. V. Rumyantsev^{1,2}, A. V. Antonov^{1,2}, A. A. Dubinov^{1,2}, A. M. Kadykov¹, A. A. Fadeev^{1,2}, K. E. Kudryavtsev¹, N. N. Mikhailov³, S. A. Dvoretckiy³, and V. I. Gavrilenko^{1,2}
¹Institute for Physics of Microstructures of Russian Academy of Sciences, Russia.
²Lobachevsky State University of Nizhny Novgorod, Russia.
³A.V.Rzhanov Institute of Semiconductor Physics, Russia.
Investigation of possibilities of WLWIR in HgCdTe based heterostructures
- Mo III.A-6** 16:30-16:45
A. Kadykov^{1,2}, F. Teppe¹, C. Consejo¹, N. Diakonova¹, D. Coquillat¹, S. Ruffenach¹, W. Knap¹, L. Vitić³, M. S. Vitiello³, S. Morozov², V. Gavrilenko², N. N. Mikhailov⁴, and S. A. Dvoretckii⁴
¹Université Montpellier II, France, ²Institute for Physics of Microstructures, Russia.
³NEST, Istituto Nanoscienze-CNR and Scuola Normale Superiore, Italy.
⁴Rzhanov Institute of Semiconductor Physics, Russia.
Terahertz excitations in HgTe-based field effect transistors

Session Mo III.B. SPINTRONICS (parallel session)

- Mo III.B-1** 15:00-15:30 **Invited talk**
L. M. K. Vandersypen
TU Delft. The Netherlands.
Multiple-spin read-out and control in semiconductor quantum dots
- Mo III.B-2** 15:30-15:45
F. Ungar¹, M. Cygorek¹, P. I. Tamborenea^{2,1}, and V. M. Axt¹
¹Universität Bayreuth, Germany. ²Universidad de Buenos Aires, Argentina.
Ultrafast spin dynamics in diluted magnetic semiconductors with spin-orbit interaction
- Mo III.B-3** 15:45-16:00
L. E. Golub, E. L. Ivchenko, and D. S. Smirnov
Ioffe Institute of the Russian Academy of Sciences, Russia.
Spin polarization and dynamics in semiconductors in moderate electric fields
- Mo III.B-4** 16:00-16:15
Y. Puttison¹, Y. Q. Huang¹, I. A. Buyanova¹, X. J. Yang², A. Subagyo², K. Sueoka, A. Murayama², and W. M. Chen¹
¹Linköping University, Sweden. ²Hokkaido University, Japan.
Optical spin injection and detection in InGaAs/GaAs quantum dots: Effect of photo-excitation energy and density



19th International Conference on Electron Dynamics in Semiconductors, Optoelectronics and Nanostructures

- Mo III.B-5** 16:15-16:30
J. Lohrenz, T. Paschen, and M. Betz
TU Dortmund, Germany.
Resonant spin amplification in intrinsic bulk germanium: Evidence for electron spin lifetimes exceeding 50ns
- Mo III.B-6** 16:30-16:45
R. Kaji¹, T. Tominaga¹, Y.-N. Wu², S.-J. Cheng², and S. Adachi¹
¹*Hokkaido University, Japan.* ²*National Chiao Tung University, Taiwan.*
Electron and hole in-plane g-factors in single InAs quantum rings
- 16:45-17:15** *Coffee Break*
- 17:00-18:30** **POSTER SESSION. Mo P**

30 June 2015, Tuesday

Session Tu I. ULTRAFAST OPTICAL PHENOMENA

- Tu I-1** **8:30-9:00** **Invited talk**
R. Bratschitsch
University of Münster, Germany.
Ultrafast valley dynamics in atomically thin transition metal dichalcogenides
- Tu I-2** 9:00-9:15
S. L. Chen¹, S. Filippov¹, W. M. Chen¹, F. Ishikawa², and I. A. Buyanova¹
¹*Linköping University, Sweden.* ²*Ehime University, Japan.*
Exciton dynamics in GaAs/GaNAs core/shell Nanowires
- Tu I-3** 9:15-9:30
T. Kuhn¹, D. E. Reiter^{1,2}, and G. F. Quinteiro³
¹*Westfälische Wilhelms-Universität Münster, Germany.* ²*Imperial College London, UK.* ³*Universidad de Buenos Aires, Argentina.*
Optical control of exciton and spin states in a quantum dot by excitation with twisted light
- Tu I-4** 9:30-9:45
A. Grupp¹, M. Trushin¹, G. Soavi¹, A. Budweg¹, D. de Fazio², U. Sassi², A. Lombardo², A. C. Ferrari², W. Belzig¹, A. Leitenstorfer¹, and D. Brida¹
¹*University of Konstanz, Germany.* ²*Cambridge Graphene Centre, UK.*
Pseudospin carrier coupling in graphene on the femtosecond timescale
- Tu I-5** 9:45-10:00
Y. Akbas¹, L. Q. Zhang², Y. Alimi², A. M. Song², I. Iñiguez-de-la-Torre³, J. Mateos³, T. González³, G. Wicks¹, and R. Sobolewski¹
¹*University of Rochester, USA.* ²*University of Manchester, UK.* ³*Universidad de Salamanca, Spain.*
Ultra-high responsivity of optically-active semiconducting asymmetric nano-channel diodes



Tu I-6 10:00-10:15

A. Krokhin, A. Neogi, A. Llopis, and M. Mahat
University of North Texas, USA.

Electrostatic enhancement of light emitted by semiconductor quantum wells

Tu I-7 10:15-10:30

A. V. Andrianov¹, A. O. Zakhar'in¹, R. K. Zhukavin², V. N. Shastin^{2,3}, and N. V. Abrosimov⁴

¹A.F. Ioffe Physical Technical Institute, Russia.

²Institute of Physics of Microstructures, Russia.

³N.I. Lobachevskii Nizhny Novgorod State University, Russia.

⁴Leibniz Institute for Crystal Growth, Germany.

Terahertz emission from lithium doped silicon under continuous wave interband optical excitation

10:30-11:00

Coffee Break

Session Tu II. THz SPECTROSCOPY

Tu II-1 11:00- 11:15

F. Meng¹, M. D. Thomson¹, B. E. Sernelius², and H. G. Roskos¹

¹Goethe-University, Germany. ²Linköping University, Sweden.

Relativistic Doppler reflection as a probe for the initial relaxation of a non-equilibrium electron-hole plasma in silicon

Tu II-2 11:15-11:30

F. Eßer^{1,2}, H. Schneider¹, S. Winnerl¹, O. Drachenko³, A. Patane⁴, G. Pettinari⁵, and M. Helm^{1,2}

¹Helmholtz-Zentrum Dresden-Rossendorf, Germany.

²Technische Universität Dresden, Germany. ³The LNCMI-Toulouse, France.

⁴The University of Nottingham, UK.

⁵Institute for Photonics and Nanotechnologies (IFN-CNR), Italy.

Cyclotron resonance spectroscopy of GaAsN in pulsed magnetic fields up to 60 T with free-electron laser IR radiation

Tu II-3 11:30-11:45

N. Kamaraju¹, W. Pan², U. Ekenberg³, D. M. Gvozdić⁴, S. Boubanga-Tombet^{1,5}, P. C. Upadhyay^{1,6}, J. Reno², A. J. Taylor¹, and R. P. Prasankumar¹

¹Los Alamos National Laboratory, USA. ²Sandia National Laboratories, USA.

³Semiconsultants, Sweden. ⁴University of Belgrade, Serbia.

⁵Tohoku University, Japan. ⁶Indian Space Research Organization, India.

Terahertz magneto-optical spectroscopy of two-dimensional hole systems

Tu II-4 11:45-12:00

Y. Zhang¹, K. Shibata^{1,2}, N. Nagai¹, C. Ndebeka-Bandou^{1,3}, G. Bastard^{1,3}, and K. Hirakawa^{1,2}

¹IIS and ²INQIE, University of Tokyo, Japan. ³Ecole Normale Supérieure, France.

Probing manybody quantum states of single InAs quantum dots by terahertz spectroscopy



Session Tu III. CARRIER DYNAMICS IN ENERGY CONVERSION

- Tu III-1** **12:00-12:30** **Invited talk**
- N. J. Ekins Daukes
Imperial College London, UK.
 Nonequilibrium carrier dynamics and advanced concept photovoltaics
- Tu III-2** **12:30-12:45**
- R. Jaramillo¹, M.-J. Sher³, B. Ofori-Okai¹, V. Steinmann¹, K. Hartman¹, K. Nelson¹,
 A. M. Lindenberg^{2,3,4}, and T. Buonassisi¹
¹Massachusetts Institute of Technology, USA. ²SLAC National Accelerator Laboratory, USA.
³Stanford University, USA. ⁴SLAC National Accelerator Laboratory, USA.
 Non-equilibrium minority carrier dynamics in tinsulfide (SnS) thin films using THz
 free-carrier absorption
- Tu III-3** **12:45-13:00**
- A. L. Vartanian, K. A. Vardanyan, V. N. Mughnetsyan, and A. A. Kirakosyan
Yerevan State University, Armenia.
 Electron capture processes in quantum dots due to one-and two-phonon assisted
 transitions: The role of optical phonon confinement
- 13:00-15:00** **LUNCH**
- 15:00-21:30** **EXCURSION**

1 July 2015, Wednesday

Session Wed I. NOVEL MATERIALS AND DEVICES

- Wed I-1** **8:30-9:00** **Invited talk**
- M. Gilbert
University of Illinois - Urb. Champaign, USA.
 Towards topological functionality novel materials for new devices
- Wed I-2** **9:00-9:15**
- N. Caselli¹, F. Intonti¹, F. La China¹, F. Riboli¹, A. Gerardino², F. Pagliano³, A. Fiore³,
 W. Bao⁴, A. W. Bargioni⁴, and M. Gurioli¹
¹University of Florence, Italy. ²CNR, Roma, Italy.
³Eindhoven University of Technology, The Netherlands.
⁴Lawrence Berkeley National Laboratory, USA.
 Plasmonic near-field imaging of the electric and the magnetic fields
- Wed I-3** **9:15-9:30**
- S. Colasanti, V. Deep Bhatt, A. Abdellah, and P. Lugli
Technical University Munich (TUM), Germany.
 3D Self-consistent percolative model for networks of randomly aligned carbon
 nanotubes



- Wed I-4** 9:30-9:45
D. Lopez-Diaz¹, C. Merino², and M. M. Velázquez¹
¹Salamanca University, Spain. ²Grupo Antolin Ingeniería, Spain.
Manufacturing transparent conductive electrodes: The effect of nanoparticle stabilizer on the optoelectronic properties
- Wed I-5** 9:45-10:00
A. Price and A. Martinez
Swansea University, U.K.
Comparison of phonon scattering in nanowire field effect transistors with Si, GaAs and InGaAs cores using the NEGF formalism
- Wed I-6** 10:00-10:15
M. Margala¹, H. Wu², and R. Sobolewski²
¹University of Massachusetts Lowell. ²University of Rochester USA.
Ballistic deflection transistors and their application to THz amplification
- Wed I-7** 10:15-10:30
E. Piccinini¹, F. Buscemi², M. Rudan¹, R. Brunetti², and C. Jacoboni²
¹University of Bologna, Italy. ²University of Modena and Reggio Emilia, Italy.
Intrinsic electric oscillations of ovonic devices towards the terahertz limit

10:30-11:00

Coffee Break

Session Wed II. GRAPHENE II

- Wed II-1** 11:00-11:30 **Invited talk**
A. Bachtold
ICFO – The Institute of Photonic Sciences, Spain.
Mechanical resonators based on nanotubes and graphene
- Wed II-2** 11:30-11:45
M. T. Greenaway¹, E. E. Vdovin^{1,4}, A. Mishchenko², T. M. Fromhold¹, O. Makarovskiy¹, A. Patané¹, K. S. Novoselov², A. K. Geim^{2,3}, and L. Eaves^{1,2}
¹University of Nottingham, UK. ²University of Manchester, UK.
³University of Manchester, UK. ⁴Russian Academy of Sciences, Russia.
Landau level spectroscopy reveals the chirality and Klein tunnelling of Dirac-Weyl fermions in twisted graphene tunnel transistors
- Wed II-3** 11:45-12:00
V. Hung Nguyen^{1,2}, H. Viet Nguyen², J. Saint-Martin¹, and P. Dollfus¹
¹Univ. Paris-Sud - CNRS, France. ²Institute of Physics, VAST, Vietnam.
Conduction gap in vertical stacks of misoriented graphene layers induced by strain engineering
- Wed II-4** 12:00-12:15
C. Cobaleda¹, S. Pezzini^{1,2}, A. Rodriguez³, E. Diez¹, and V. Bellani²
¹Universidad de Salamanca, Spain. ²Università degli studi di Pavia, Italy.
³Albert-Ludwigs-Universität Freiburg, Germany.
Percolation transitions in bilayer graphene encapsulated by hexagonal boron nitride



Wed II-5 12:15-12:30

M. Settnes, S. R. Power, D. H. Pedersen, and A.-P. Jauho
Technical University of Denmark. Denmark.
 Bubbles and perforations in graphene- a computational study

Wed II-6 12:30-12:45

M. Saiz-Bretin¹ A. M. Malyshev^{1,2}, and F. Domínguez-Adame^{1,3}
¹*Universidad Complutense, Spain.* ²*Ioffe Physical-Technical Institute, Russia.*
³*University of Warwick, UK.*
 Graphene quantum rings with enhanced thermoelectric response

Wed II-7 12:45-13:00

O. Couturaud¹, M. Yang², W. Escoffier², B. Jouault¹, M. Pierre², and M. Goiran²
¹*CNRS-Université de Montpellier, France.* ²*CNRS-Université de Toulouse, France.*
 Quantum Hall effect in graphene grown by chemical vapor deposition on SiC

13:00-15:00

LUNCH

Session Wed III.A. QUANTUM COMPUTING (parallel session)

Wed III.A-1 15:00-15:30 **Invited talk**

A. Sachrajda
National Research Council of Canada, Canada.
 Spin manipulation in triple quantum dots

Wed III.A -2 15:30-15:45

F. Gallego-Marcos, R. Sánchez, and G. Platero
Instituto de Ciencia de Materiales, CSIC Spain.
 Interference of real and virtual transitions in quantum dot chains

Wed III.A -3 15:45-16:00

C. Meyer zu Rheda¹, G. Haack^{2,1}, and A. Romito¹
¹*Freie Universität, Germany.* ²*CEA, INAC-SPSMS, France.*
 On-demand maximally entangled states with a parity meter and continuous feedback

Wed III.A -4 16:00-16:15

C. Anton¹, T. C. H. Liew², M. D. Martín^{1,3}, P. S. Eldridge⁴, Z. Hatzopoulos⁴, G. Stavrinidis⁴, P. G. Savvidis⁴, and L. Viña^{1,3,5}
¹*Universidad Autónoma de Madrid, Spain.* ²*Nanyang Technological University, Singapore.*
³*Universidad Autónoma de Madrid, Spain.* ⁴*FORTH-IESL, Greece.*
⁵*Universidad Autónoma de Madrid, Spain.*
 Optical manipulation of polariton condensates on a chip



Wed III.A -5 16:15-16:30

A. Beggi¹, F. Buscemi¹, P. Bordone^{1,2}, and A. Bertoni²

¹ Università degli Studi di Modena e Reggio Emilia, Italy. ² CNR - Istituto Nanoscienze, Italy.

Time-dependent modelling of single-electron interferometry with edge-states

Wed III.A-6 16:30-16:45

D. Marian^{1,2}, E. Colomés¹, N. Zangh², and X. Oriols¹

¹ Universitat Autònoma de Barcelona, Spain. ² Università di Genova, Italy.

Weak measurement from the electron displacement current: New path for applications

Session Wed III.B: THERMAL TRANSPORT (parallel session)

Wed III.B-1 15:00-15:30 **Invited talk**

D. Hatanaka, I. Mahboob, K. Onomitsu, and H. Yamaguchi

NTT Corporation, Japan.

Phononic crystal waveguides with dynamic control

Wed III.B-2 15:30-15:45

D. E. Reiter^{1,2}, D. Wigger¹, S. Lüker¹, V. M. Axt³, P. Machnikowski⁴, and T. Kuhn¹.

¹ Universität Münster, Germany. ² Imperial College London, UK.

³ Universität Bayreuth, Germany. ⁴ Wrocław University of Technology, Poland.

Generation sequences of phonon wave packets by optical excitation of a quantum dot

Wed III.B-3 15:45-16:00

B. Sothmann¹, R. Sánchez², and A. N. Jordan^{3,4}

¹ Université de Genève, Switzerland. ² ICM-ISC, Spain.

³ University of Rochester, USA. ⁴ Chapman University, USA

Chiral thermoelectrics.

Wed III.B-4 16:00-16:15

J. Larroque, P. Dollfus, and J. Saint-Martin

Université Paris-Sud, France.

A full-band Boltzmann Monte Carlo study on non-stationary thermal transport in Silicon nanowires

Wed III.B-5 16:15-16:30

M. Mohamed¹, Z. Aksamija², and U. Ravaioli^{1,3}

¹ University of Illinois at Urbana-Champaign, USA.

² University of Massachusetts Amherst, USA. ³ University of Illinois-Urbana, USA.

Using coupled electron and thermal transport to understand self-heating effects in junctionless MOSFET

Wed III.B-6 16:30-16:45

J. Mateos¹, I. Iniguez-de-la-Torre¹, H. Rodilla², J. Schlee², J. Grahn², T. González¹, and A. J. Minnich³

¹ Universidad de Salamanca, Spain. ² Chalmers University of Technology, Sweden.

³ California Institute of Technology, USA.

On the intrinsic limit for the temperature lowering in cryogenic low-noise InP HEMTs



16:45-17:15

Coffee Break

17:00-18:30

POSTER SESSION. Wed P

20:30

GALA DINNER

2 July 2015, Thursday

Session Thu I: 2D FUNCTIONAL MATERIALS

Thu I-1

8:30-9:00

Invited talk

A. Patanè¹, G.W. Mudd¹, S. A. Svatek¹, N. Balakrishnan¹, O. Makarovskiy¹, P. H. Beton¹, L. Eaves¹, M. W. Fay², Z. R. Kudrynskyi³, and Z. D. Kovalyuk³

¹The University of Nottingham, UK, ³The National Academy of Sciences of Ukraine, Ukraine.
Physics and applications of van der Waals InSe nanosheets and junctions

Thu I-2

9:00-9:15

O. Makarovskiy¹, L. Turyanska¹, S. A. Svatek¹, P. H. Beton¹, C. J. Mellor¹, A. Patanè¹, L. Eaves¹, N. R. Thomas², M. W. Fay³, A. J. Marsden⁴, and N. R. Wilson⁴

^{1,2,3}The University of Nottingham, UK. ⁴Department of Physics, UK.

Ligand-induced control of photoconductive gain and doping in a hybrid graphene-quantum dot transistor

Session Thu II: NON-EQUILIBRIUM CARRIER DYNAMICS-EXPERIMENTAL

Thu II-1

9:15-9:45

Invited talk

K. Tanimura

Osaka University, Japan.

Imaging energy-, momentum-, and time-resolved distributions of photoinjected hot electrons in semiconductors

Thu II-2

9:45-10:00

W. Pan¹ and N. Kamaraju²

¹Sandia National Labs, USA. ²Los Alamos National Lab, USA

Bloch oscillations in two dimensions

Thu II-3

10:00-10:15

K. Shibata¹, K. Yoshida², T. Minamiya¹, K. Sato¹, and K. Hirakawa²

¹Tohoku Institute of Technology, Japan. ²University of Tokyo, Japan.

Electric-field control of conductance in metal point contacts by electric-double-layer gating



19th International Conference on Electron Dynamics in Semiconductors, Optoelectronics and Nanostructures

- Thu II-4** 10:15-10:30
Y.-H. Lee¹, J. E. Han², J. Lee¹, S. Xiao¹, J. L. Reno³, and J. P. Bird¹
^{1,2}University at Buffalo, USA. ³CINT, Sandia National Laboratories, USA.
Keeping cool by getting hot: Protected subband formation in quantum point contacts subjected to extreme biasing
10:30-11:00 Coffee Break

Session Thu III. NON-EQUILIBRIUM CARRIER DYNAMICS- MODELLING

- Thu III-1** 11:00-11:15
R. Rosati¹, R. C. Lotti¹, F. Dolcini^{1,2}, and F. Rossi¹
¹Politecnico di Torino, Italy. ²CNR-SPIN, Italy.
Microscopic treatment of energy dissipation and decoherence via many-body Lindblad superoperators
- Thu III-2** 11:15-11:30
N. Sano, M. R. Zulhidza, Y. Kaneno, S. Honda, A. Ueda, and K. Yoshida
University of Tsukuba, Japan.
Correlation effects of localized impurities on electron transport under 1-D nanostructures
- Thu III-3** 11:30-11:45
R. Hartwar, M. Saraniti, and S. M. Goodnick
Arizona State University, USA.
Energy relaxation and non-linear transport in InAs nanowires
- Thu III-4** 11:45-12:00
M. Aldegunde¹, S. P. Hepplestone², P. V. Sushko³, and K. Kalna⁴
¹University of Warwick, UK. ²Deregallera Ltd., UK.
³Pacific Northwest National Laboratory, USA. ⁴Swansea University, UK.
Multi-scale simulations of metal-semiconductor nanoscale contacts

Session Thu IV. BIOELECTRONICS

- Thu IV-1** 12:00-12:15
P. V. Gwozdz¹, A. Bhat², A. Seshadri², and R. H. Blick^{1,2,3}
¹Institutes for Nanostructure and Solid State Physics (INF), Germany.
²University of Wisconsin-Madison, USA.
³Center for Hybrid Nanostructures (CHYN) Germany.
Real time detection of sub-micron particles translocating through micropores
- Thu IV-2** **12:15-12:45** **Invited Closing Speaker**
L. Reggiani
Università del Salento, Italy.
Proteotronics: The emerging science of protein-based electronic devices
12:45-13:00 CLOSING SESSION
13:00-15:00 LUNCH



POSTER SESSION. Mo P

- Mo P-1** Y. Kawakami¹, T. Tawara^{2,3}, H. Omi^{2,3}, R. Kaji¹, and S. Adachi¹
¹Hokkaido University, Japan. ^{2,3}NTT Corporation, Japan.
 Inter- and intra-site energy transfers in (Sc,Er)₂O₃ thin films grown on Si(111)
- Mo P-2** F. Werschler¹, C. Hinz¹, T. de Roo², S. Mecking², A. Leitenstorfer¹, and D. V. Seletskiy¹
^{1,2}University of Konstanz, Germany.
 Phonon mediated fine-structure relaxation and discrete exciton-phonon coupling in single nanocrystal quantum dots
- Mo P-3** E. Welander, J. Hildmanny, and G. Burkard
 University of Konstanz, Germany.
 Influence of hyperfine interaction on the entanglement of photons generated by biexciton recombination
- Mo P-4** S. Kohler
 Instituto de Ciencia de Materiales de Madrid, CSIC, Spain.
 Landau-Zener-Stückelberg-Majorana interferometry: A tool for measuring decoherence
- Mo P-5** M.-F. Wu, Y.-N. Wu, and S.-J. Cheng
 Department of Electrophysics, National Chiao Tung University, Hsinchu, Taiwan.
 Mechanically controlled g-tensor modulation resonances of hole spins in droplet epitaxial quantum dots
- Mo P-6** C. Hinz, C. Traum, J. Haase, B. Bauer, A. Leitenstorfer, and D. V. Seletskiy
 University of Konstanz, Germany.
 Transient biexcitonic absorption and ultrafast hole relaxation in single CdSe/ZnSe quantum dots
- Mo P-7** S. Lüker¹, D. E. Reiter^{1,2}, and T. Kuhn¹
¹Universität Münster, Germany. ²Imperial College London, UK.
 Dark exciton preparation in quantum dots using chirped laser pulses
- Mo P-8** S. Melzer¹, J. Lohrenz¹, C. Ruppert¹, I. A. Akimov¹, M. Reichelt², T. Meier², and M. Betz¹
¹TU Dortmund, Germany. ²Universität Paderborn, Germany.
 Ultrafast optical control over the exciton-polariton propagation in CdZnTe
- Mo P-9** A. Pusch¹, S. Guazzotti¹, D. E. Reiter^{1,2}, and O. Hess¹
¹Imperial College London, UK. ²University of Münster, Germany.
 Dynamical calculation of third harmonic generation in a semiconductor quantum well



- Mo P-10** J. Serafini¹, L. Crandall¹, Y. Akbas¹, R. Bellman², C. K. Williams², and R. Sobolewski¹
¹University of Rochester, USA. ²Corning Incorporated, USA.
 Nonequilibrium carrier dynamics in ultrathin Si-on-glass films
- Mo P-11** V. Clerico¹, X. Shi², W. Yu^{3,2}, S. Pezzini^{1,4}, C. Hernández-Fuentevilla¹, Z. Jiang³, D. H. Huang⁵, G. Gumbs⁶, V. Bellani⁴, E. Diez¹, Y. Meziani¹, W. Pan², S. D. Hawkins², and J. F. Klem²
¹Universidad de Salamanca, Spain. ²Sandia National Laboratories, USA.
³Georgia Institute of Technology, USA. ⁴Università degli studi di Pavia, Italy.
⁵Kirtland Air Force Base, USA. ⁶Hunter College of the City University of New York, USA.
 Excitonic insulator phase of degenerate InAs/GaSb double quantum wells
- Mo P-12** J. I. Izpura¹ and J. Malo²
^{1,2}Universidad Politécnica de Madrid, Spain.
 The electron dynamics underlying thermal noise in two-terminal devices
- Mo P-13** A. Satou¹, Y. Koseki¹, V. Ryzhii¹, V. V. Popov², and T. Otsuji¹
¹Tohoku University, Japan.
²Kotelnikov Institute of Radio Engineering and Electronics, Russia.
 Computational study of plasmon instabilities in dual-grating-gate graphene transistor
- Mo P-14** N. Dyakonova¹, D. B. But¹, D. Coquillat¹, W. Knap¹, C. Drexler², P. Olbrich², J. Karch², M. Schafberger², S. D. Ganichev², G. Ducournau³, C. Gaquiere³, M.-A. Poisson⁴, S. Delage⁴, G. Cywinski⁵, and C. Skierbiszewski⁵
¹CNRS-Univ. Montpellier, France. ²University of Regensburg, Germany.
³Institut d'Electronique et de Microélectronique du Nord, UMR CNRS, France.
⁴Thales Research and Technology, France. ⁵Institut of High Pressure Physics, PAS, Poland.
 Photoresponse of AlGaIn/GaN field effect transistor to 1.1 THz radiation of high intensity
- Mo P-15** V. V. Korotyevev¹, V.A. Kochelap¹, S. Vitusevich², V. Sydoruk², and L. Varani³
¹Institute of Semiconductor Physics, Ukraine. ²Peter Grunberg Institute, Germany.
³University Montpellier 2, France.
 Steady-state and high-frequency electron transport in GaN nanowires
- Mo P-16** V. Gružinskis¹, P. Shiktorov¹, and E. Starikov¹, H. Marinchio², C. Palermo², J. Torres², and L. Varani²
²Center for Sciences and Technology, Lithuania. ¹Université de Montpellier- Campus St Priest, France.
 Stepped current-voltage relation and THz oscillations in GaN MOSFET due to optical phonon emission: Monte Carlo simulation
- Mo P-17** H. Marinchio¹, V. Korotyevev², C. Palermo¹, and L. Varani¹
¹University of Montpellier, France. ²Institute of Semiconductor Physics, Ukraine.
 Hybrid plasma modes in transistors: Linear and non-linear responses



- Mo P-18** D. Coquillat¹, V. Nodjiadjim², A. Konczykowska², N. Dyakonova¹, C. Consejo¹, S. Ruffenach¹, F. Teppe¹, M. Riet², A. Muraviev³, A. Gutin³, M. Shur³, J. Godin², and W. Knap¹
¹CNRS -Univ. Montpellier, France. ²III -V Lab (Bell Labs, TRT and CEA/LETI joint Lab), France.
³Rensselaer Polytechnic Institute, USA.
 InP double heterojunction bipolar transistor for broadband terahertz detection and imaging systems
- Mo P-19** M. Marcinkiewicz¹, F. Teppe¹, C. Consejo¹, N. Dyakonova¹, D. Coquillat¹, S. Ruffenach¹, W. Knap¹, F. Gonzalez-Posada², L. Cerutti², E. Tournié², N. N. Mikhailov³, and S. A. Dvoretiskii³
^{1,2}Université Montpellier, France. ³Russian Academy of Science, Russia.
 Terahertz studies/probing of 2D and 3D topological transitions
- Mo P-20** S. G. Pavlov¹, N. Deßmann², A. Pohl², N. V. Abrosimov³, M. Mittendorff^{4,5}, S. Winnerl⁴, R. Kh. Zhukavin⁶, V. V. Tsyplenkov⁶, D. V. Shengurov⁶, V. N. Shastin^{6,7}, and H.-W. Hübers^{1,8}
¹German Aerospace, Germany. ²Technische Universität Berlin, Germany.
³Leibniz-Institute for Crystal Growth, Germany.
⁴Helmholtz-Zentrum Dresden-Rossendorf, Germany. ⁵Technische Universität Dresden, Germany.
⁶Russian Academy of Sciences, Russia. ⁷Nizhny Novgorod State University, Russia.
⁸Humboldt-Universität zu Berlin, Germany.
 Towards a life-time-limited 8-octave-infrared photoconductive germanium detector
- Mo P-21** D. Pardo¹, J. Grajal¹, and S. Pérez²
¹Technical University of Madrid, Spain. ²Salamanca University, Spain.
 Nonequilibrium transport in GaAs Schottky mixers at 2.5 THz
- Mo P-22** I. Íñiguez-de-la-Torre¹, T. González¹, J. Mateos¹, A. Westlund², and J. Grahn²
¹Salamanca University, Spain. ²Chalmers University of Technology, Sweden.
 Zero-bias THz detection in InAs nano-diodes at room temperature
- Mo P-23** I. Íñiguez-de-la-Torre¹, A. Rodríguez¹, Ó. García-Pérez¹, S. García¹, T. González¹, J. Mateos¹ and S. Pérez¹, A. Westlund², P.-Å. Nilsson², and J. Grahn²
¹Salamanca University, Spain. ²Chalmers University of Technology, Sweden.
 Temperature and surface traps Influence on the THz emission from InGaAs diodes
- Mo P-24** V. Clérico^{1,2}, Y.M. Meziani², E. Diez¹, and J.E. Velázquez²
^{1,2}Salamanca University, Spain.
 Terahertz spectroscopy of a multilayers flake of graphene
- Mo P-25** J. A. Delgado Notario, Y. M. Meziani, and J. E. Velázquez-Pérez
 Universidad de Salamanca , Spain.
 TCAD study of sub-THz photovoltaic response of strained-Si MODFET



- Mo P-26** A. S. Borukhovich¹ and A. V. Troshin²
¹Russian State Vocational Pedagogical University, Russia.
²National Investigation Nuclear University “MEPHI”, Russia.
Spin transistor on the based of EuO:Fe/GaAs contact
- Mo P-27** A. S. Borukhovich¹, O. V. Anoshina¹, and V. P. Zhukov²
¹Russian State Vocational Pedagogical University, ²Institute of chemistry of solids Ural branch of RAS, Russia.
Band structure and properties of the nanostructured spin injector: EuO:Fe
- Mo P-28** M. Cygorek and V. M. Axt
Universität Bayreuth, Germany.
Spin dynamics of carriers in diluted magnetic semiconductors beyond mean field and Golden Rule approximation
- Mo P-29** K. A. Vardanyan, A. L. Vartanian, and A. A. Kirakosyan
Yerevan State University, Armenia.
Confined acoustic phonon-mediated spin relaxation in a two-dimensional quantum dot in the presence of perpendicular magnetic field
- Mo P-30** M. A. Yerosyan^{1,2}, K. A. Vardanyan¹, A. L. Vartanian¹, and A. A. Kirakosyan¹
¹Yerevan State University, Armenia.
²State Engineering University of Armenia, Armenia.
Effect of Rashba and Dresselhaus spin-orbit interactions on the polaron properties in wurtzite semiconductor quantum dot in the presence of external fields
- Mo P-31** S. Pezzini^{1,2}, C. Cobaleda¹, B. A. Piot³, E. Diez¹, and V. Bellani²
¹Universidad de Salamanca, Spain. ²Università degli studi di Pavia, Italy.
³CNRS-UJF-UPS-INSA, France.
Antiferromagnetic to ferromagnetic phase transition in bilayer graphene
- Mo P-32** R. Somphonsane¹, H. Ramamoorthy², and J. P. Bird²
¹King Mongkut's Institute of Technology Ladkrabang, Thailand.
²University at Buffalo, USA.
Phonon-induced hot-carrier scattering in graphene: Insights from differential conductance
- Mo P-33** R. Rosati, F. Dolcini, and F. Rossi
Politecnico di Torino, Italy.
Scattering-induced quantum diffusion in graphene
- Mo P-34** J. R. F. Lima
Instituto de Ciencia de Materiales de Madrid (CSIC), Spain.
Electronic structure of graphene superlattices with massive Dirac fermions
- Mo P-35** M. Chung Nguyen^{1,2}, V. Hung Nguyen^{1,2}, H. Viet Nguyen², J. Saint -Martin¹, and P. Dollfus¹
¹Univ. Paris-Sud CNRS, France. ² Institute of Physics, VAST, Vietnam.
Enhancement of Seebeck effect in strained graphene PN junctions



- Mo P-36** S. A. Tarasenko, L. E. Golub, and E. L. Ivchenko
Ioffe Physical-Technical Institute, Russia.
Valley polarization induced optical effects in graphene
- Mo P-37** R. Rengel, J. M. Iglesias, E. Pascual, and M. J. Martín
University of Salamanca, Spain.
Effect of charged impurity scattering on the electron diffusivity and mobility in graphene
- Mo P-38** C. H. Fuentevilla¹, J. D. Lejarreta¹, E. Diez², and C. Cobaleda²
^{1,2}*Salamanca University, Spain.*
Angle dependent conductivity in graphene FET transistors
- Mo P-39** M. Fortes, E. Comesaña, J. A. Rodriguez, P. Otero, and A. J. Garcia-Loureiro
University of Santiago de Compostela, Spain.
Evaluation of the collection length and optical path enhancement in a-Si:H solar cells

POSTER SESSION. Wed P

- Wed P-1** V. Janković and N. Vukmirovic
University of Belgrade, Serbia.
Nonequilibrium terahertz conductivity in systems with localized electronic states
- Wed P-2** A. L. Asatryan, K. A. Vardanyan, A. L. Vartanian, and A. A. Kirakosyan
Yerevan State University, Armenia.
The influence of electric field on the quasi-confined and interface polaron basic parameters in a wurtzite nitride quantum wire
- Wed P-3** J. Fransson
Department of Physics and Astronomy, Uppsala University, Uppsala, Sweden.
Electrical and thermal control of magnetic exchange interactions in molecular magnetic quantum dots
- Wed P-4** S. Illera, J. D. Prades, and A. Cirera
Universitat de Barcelona, Spain.
Electronic transport in Qd based structures: from basic parameters to opto-electronic device simulations
- Wed P-5** M. I. Alomar^{1,2}, J. S. Lim³, and D. Sánchez^{1,2}
¹*UIB-CSIC, Palma de Mallorca, Spain.* ²*Universitat de les Illes Balears, Spain.*
³*Korea Institute for Advanced Study, Korea.*
Dynamical response of interacting mesoscopic capacitors



- Wed P-6** V.A. Kochelap¹, V. V. Korotyeyev¹, G.I. Syngayivska¹, and L. Varani²
¹*Institute of Semiconductor Physics, Ukraine*
²*University Montpellier 2, France*
 High-field electron transport in GaN under crossed electric and magnetic fields
- Wed P-7** F. Michelini¹, A. Crépieux², F. Gibelli³, J.-F. Guillemoles³, N. Cavassilas¹, and R. Whitney⁴
¹*Aix-Marseille Université, France.* ²*Aix-Marseille et Toulon Universités, France.*
³*CNRS, Chatou, France.* ⁴*Université Joseph Fourier, CNRS, Grenoble, France.*
 Double barrier designed contacts for photovoltaic devices
- Wed P-8** A. Storeboe and T. Brudevoll
Norwegian Defense Research Establishment, Norway.
 Modeling of a back-illuminated HgCdTe MWIR avalanche photodiode with alloy gradients
- Wed P-9** O. Muscato and V. Di Stefano
Catania University, Italy.
 Hydrodynamic model for silicon carbide semiconductors including crystal heating
- Wed P-10** A. Apostolakis, A. G. Balanov, and K. N. Alekseev
Loughborough University, UK.
 Acoustic control of electron dynamics in semiconductor superlattices
- Wed P-11** K. H. Park, P. Martin, and U. Ravaioli
University of Illinois at Urbana-Champaign, USA.
 Enhancement of thermoelectric efficiency in non-uniform semiconductor nanowires
- Wed P-12** J. H. Oh and M. Shin
Korea Advanced Institute of Science and Technology, Korea.
 Current-induced torques of finite thickness F/N bilayers under Rashba spin-orbital interaction
- Wed P-13** Y. Y. Romanova
Institute for Physics of Microstructures RAS, Russia.
 Negative conductivity and heating of electron gas in one-dimensional semiconductor superlattices
- Wed P-14** I. Kanazawa
Tokyo Gakuji University, Japan.
 Goldstone mode induced by skyrmions and collective modes in disordered quantum Hall crystals
- Wed P-15** V. Jakštas¹, V. Janonis¹, A. Bičiūnas¹, R. Aleksiejūnas², A. Kadys², T. Malinauskas, and I. Kašalynas¹
¹*Center for Physical Sciences and Technology, Lithuania.* ²*Vilnius University, Lithuania.*
 Impact of a superlattice on electrical properties of AlGaIn/GaN/sapphire 2DEG structures



- Wed P-16** V. Talbo¹, J. Mateos¹, Y. Lechaux², N. Wichmann², S. Bollaert², and B. G. Vasallo¹
¹Salamanca University, Spain. ²Institute of Electronics, Microelectronics and Nanotechnology, France.
 Monte Carlo model for the analysis and development of III-V Tunnel-FETs and Impact Ionization-MOSFETs
- Wed P-17** N. Mendil, M. Daoudi, Z. Berkai, and A. Belghachi
 University of Tahri Mohamed Bechar, Algeria.
 Disorder effect on carrier mobility in fullerene organic semiconductor
- Wed P-18** A. Matsuoka, A. Emoto, and N. Ohtani
 Doshisha University, Japan.
 Enhancement of radiative efficiencies of near-ultraviolet organic light-emitting diodes by localized surface plasmon resonance effect
- Wed P-19** J. Dimmock^{1,2}, M. Kauer¹, P. N. Stavrinou², and N. J. Ekins Daukes²
¹Sharp Laboratories of Europe Ltd, UK. ²Imperial College London, UK.
 Metallic absorbers and the hot carrier solar cell
- Wed P-20** H. Tanimura, J. Kanasaki, and K. Tanimura
 Osaka University, Japan.
 State-resolved ultrafast dynamics of impact ionization in InSb studied by time- and angle-resolved photoemission spectroscopy
- Wed P-21** N. Mori¹, R. Hill², A. Patané², and L. Eaves²
¹Osaka University, Japan. ²University of Nottingham, UK.
 Monte Carlo study on anomalous carrier diffusion in inhomogeneous semiconductors
- Wed P-22** D. Moro-Melgar¹, J. Trettel¹, A. Maestrini¹, J. Mateos², T. González², and B. G. Vasallo²
¹Observatoire de Paris, LERMA, France. ²Salamanca University, Spain.
 A Monte Carlo study of the junction capacity in two-dimensional Schottky diode structures
- Wed P-23** I. Kanazawa
 Tokyo Gakugei University, Japan.
 Fractional topological-charge on a domain wall of a narrow-gap semiconductor-dots and D-brane-like dots
- Wed P-24** M. Ruiz-Garcia, M. Alvaro, M. Carretero, and L. L. Bonilla
 Universidad Carlos III de Madrid, Spain.
 Noise enhanced spontaneous chaos in semiconductor superlattices at room temperature
- Wed P-25** E. Colomés, D. Marian, and X. Oriols
 Universitat Autònoma de Barcelona, Spain.
 Unexpected new many-particle terms in quantum noise
- Wed P-26** Ó. García-Pérez¹, J. Mateos¹, S. Pérez¹, A. Westlund², J. Grahn², and T. González¹
¹Universidad de Salamanca, Spain. ²Chalmers Univ. of Tech., Sweden.



- Shot-noise suppression effects in InGaAs planar diodes at room temperature
- Wed P-27** M. Pino
Rutgers The State University of New Jersey, USA.
 Entanglement growth in many-body localized systems with long-range interactions
- Wed P-28** A.V. Velichko¹, M. Kesaria², A. Patanè¹, O. Makarovskiy¹, M. Capizzi³, I. C. Sandall⁴, C.H. Tan⁴, A. Krier², and Q. Zhuang²
¹The University of Nottingham, UK. ²Lancaster University, UK.
³Sapienza Università di Roma, Italy. ⁴The University of Sheffield, UK.
 Dilute nitride In(AsNSb) alloys for mid-infrared applications
- Wed P-29** Y. Lechaux, A. Fadjie, N. Wichmann, and S. Bollaert
Lille 1 University, France.
 Improvement of interfacial and electrical properties of Al₂O₃/n-Ga_{0.47}In_{0.53}As for III-V impact-ionization MOSFETs
- Wed P-30** J. Osca and L. Serra
Universitat de les Illes Balears, Spain.
 Majorana states in presence of orbital motion in planar hybrid nanowires.
- Wed P-31** J. Osca¹, D. Ruiz¹, and L. Serra^{1,2}
^{1,2}Universitat de les Illes Balears, Spain.
 Optical absorption of 2D Majorana nanowires
- Wed P-32** W. Desrat¹, C. Consejo¹, F. Teppe¹, S. Contreras¹, M. Marcinkiewicz¹, W. Knap^{1,2}, A. Nateprov³ and E. Arushanov³
¹CNRS-Universit de Montpellier, France. ²Polish Academy of Sciences, Poland.
³Academy of Sciences of Moldova, Moldova.
 Non-trivial Berry phase in the Cd₃As₂ 3D Dirac semimetal
- Wed P-33** D. Nagy, M. Aldegunde, M. A. Elmessary, and K. Kalna
Swansea University, UK.
 The effect of interface roughness scattering on Si SOI FinFET with Ando's and extended Prang and Nee model
- Wed P-34** ¹J.-F. Millithaler, I. Iñiguez-de-la-Torre², J. Mateos², T. González², and M. Margala¹
¹University of Massachusetts, USA. ²Salamanca University, Spain.
 Optimization of ballistic deflection transistors by Monte Carlo simulations
- Wed P-35** N. Caselli¹, F. Intonti¹, F. La China¹, F. Riboli¹, A. Gerardino², X. Le Roux³, W. Zhang³, E. Cassan³, L. Vivien³, F. Pagliano⁴, A. Fiore⁴, and M. Gurioli¹
¹University of Florence, Italy.
²Institute of Photonics and Nanotechnology, CNR, Italy.
³Univ Paris 11, France. ⁴Eindhoven University of Technology, The Netherlands.
 Fano near field imaging of photonic localized modes



Wed P-36 N. López¹, A. F. Braña¹, C. García-Núñez¹, M. J. Hernández², M. Cervera², K. M. Yu², W. Walukiewicz³, and B. J. García¹

¹Universidad Autónoma de Madrid, Spain. ²City University of Hong Kong, China.

³Lawrence Berkeley National Laboratory, USA.

Fabrication and characterization of multiband solar cells based on highly mismatched alloys

Wed P-37 Y. Sun¹, K. Ashida¹, S. Sasaki¹, T. Maemoto¹, S. Sasa¹, S. Kasai², I. Iñiguez-de-la-Torre³, and T. González³

¹Osaka Institute of Technology, Japan. ²Hokkaido University, Japan.

³Universidad de Salamanca, Spain.

Fabrication and characterization of fully transparent ZnO thin-film transistors and self-switching nano-diodes

Wed P-38 A. F. Braña¹, E. Forniés², N. López¹, and B. J. García¹

¹Universidad Autónoma de Madrid, Spain. ²Aurinka PV Group, Spain.

High efficiency Si solar cells characterization using impedance spectroscopy analysis.

Wed P-39 J. Cayao¹, E. Prada², P. San-Jose¹, and R. Aguado¹

¹Instituto de Ciencia de Materiales de Madrid (ICMM-CSIC), Spain.

²Universidad Autónoma de Madrid, Spain.

SNS junctions in nanowires with spin-orbit coupling: role of confinement and helicity on the sub-gap spectrum