Theme: Reaching out to the World of Matter, Material and its Physics

***For available speaker slots***

materialsphysics@annualconferences.org

http://materialsphysics.physicsmeeting.com/
# 4th International Conference on Condensed Matter and Materials Physics

**March 12-13, 2018 | Barcelona, Spain**

## Program at a Glance

### Day 1

<table>
<thead>
<tr>
<th>Time</th>
<th>General Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.00-09.00</td>
<td></td>
</tr>
<tr>
<td>09.00-09.15</td>
<td>Inaugural Address</td>
</tr>
<tr>
<td>09.15-09.45</td>
<td>Keynote/Plenary Talk 1</td>
</tr>
<tr>
<td>09.45-10.15</td>
<td>Keynote/Plenary Talk 2</td>
</tr>
<tr>
<td>10.15-10.45</td>
<td>Keynote/Plenary Talk 3</td>
</tr>
<tr>
<td>11.00-12.40</td>
<td>5 Speakers (20 Mins Each)</td>
</tr>
</tbody>
</table>

**Lunch Break 12.35-13.25**

| 13.30-15.30 | 6 Speakers (20 Mins Each)                                                        |

**Coffee/Tea Break 15.30-15.45 (Networking)**

| 15.45-17.25 | 5 Speakers (20 Mins Each)                                                        |

### Day 2

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1</th>
<th>Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>09.00-10.40</td>
<td>5 Speakers (20 Mins Each)</td>
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</tr>
<tr>
<td>10.55-12.35</td>
<td>5 Speakers (20 Mins Each)</td>
<td>Speakers (20 Mins Each)</td>
</tr>
</tbody>
</table>

**Lunch Break 12.35-13.25**

| 13.25-15.05| 5 Speakers (20 Mins Each)           | Speakers (20 Mins Each)             |

**Poster Sessions**

**Coffee/Tea Break 15.05-15.20 (Networking)**

| 15.20-17.00| 5 Speakers (20 Mins Each)           | Speakers (20 Mins Each)             |

### Awards & Closing Ceremony

**NOTE: Program Schedule is subject to change with final allotment of the speaker slots**

For more Details PS: http://materialsphysics.physicsmeeting.com/

materialsphysics@annualconferences.org
About Barcelona

Barcelona is the capital city of the autonomous community of Catalonia in Spain. It is the country’s second most populous municipality in Spain, with a population of 1.6 million, being the sixth most populous urban area in the European Union. It is located on the northeast coast of the Iberian Peninsula, which covers an area of 170 km² of which 101 km² are occupied by the city itself. It is 120 kilometers (75 miles) south of the Pyrenees and the Catalan border with France. Most spoken language in Barcelona is Spanish and it is understood almost universally.

Internationally it is renowned a tourist destination, with numerous entertaining areas, the most famous historic buildings, monuments and museums, including eight UNESCO World Heritage Sites. The best way to get around is by using the metro, there are stations all over the city and the lines are distinguishable by both number and colour. This is a city located on the water; the beach is only 15 minutes walk from La Rambla and thousands flock here every day during the summer months. You will find a famous shopping centre on the water known as Maremagnum. It is the 20th most visited city in the world by international visitors and the 5th most visited city in Europe after London, Paris, Istanbul and Rome, with 5.5 million international visitors per year and it is ranked as the most popular city to visit in Spain.

Venue
Barcelona, Spain

Important Dates

Abstract Submission Opens: July 6, 2017
Registration Opens: July 10, 2017
On spot Registration: March 12, 2018

Contact Details:
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Tel: +1-888-843-8169, Fax: +1-650-618-1417
E: http://materialsphysics.physicsmeeting.com/

http://materialsphysics.physicsmeeting.com/
City Attractions

National Art Museum of Catalonia
Sagrada-Familia
Tibidabo Amusement Park
Camp-Nou
Plaza-Cataluny
Santa maria Del Mar
The Aquarium of Barcelona
Casa Mila
Scientific Program
International Conference and Exhibition on
Mesoscopic & Condensed Matter Physics
June 22-24, 2015  Boston, USA

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Email: condensedmatterphysics@conferenceseries.com, condensedmatterphysics@conferenceseries.net
08:30-9:30 Registrations

09:30-9:55 Opening Ceremony

Keynote Forum

09:55-10:00 Introduction

10:00-10:30 Peter L. Hagelstein
Massachusetts Institute of Technology, USA

10:50-11:20 Arun Bansil
Northeastern University, USA

11:20-11:50 Mehdi Anwar
University of Connecticut, USA

Track 9: Applications and New Dimensions in Technology

Session Chair: Peter L. Hagelstein, Massachusetts Institute of Technology, USA
Session Co-Chair: Mehdi Anwar, University of Connecticut, USA

Coffee Break 10:30-10:50@Foyer

11:50-12:10 GaN HEMTs for next generation electronics
Puneet Srivastava, Massachusetts Institute of Technology, USA
Clean unit system platform in "atom-bit-energy/environment" space for high-efficiency solar cells and

12:10-12:30 kinetosomogram (KSG) applications
Akira Ishibashi, Hokkaido University, Japan
Large spin-dependent thermoelectric effects using CoFe-based alloy

12:30-12:50 Three-component gyrotropic metamaterial
Takashi Kimura, Kyushu University, Japan

12:50-13:10 Study of molecular dynamics in two liquid crystal dimers using laser Raman spectroscopy
Igor Tralle, University of Rzeszow, Poland

13:10-13:30 Topological defects in graphene nanostructures
Jan Smotlacha, Joint Institute for Nuclear Research, Russia
Impact of ambient H2S atmosphere on the growth and properties of vacuum evaporated sulfide semiconductors thin films for device applications

Lunch Break 13:30-14:30@Foyer

14:30-14:50 Ultrasensitive far-infrared / THz detection with graphene photodetectors
Dan Prober, Yale University, USA
Spin-singlet resonance state in proton-embedded metals: Discovery of novel high-T_K system leading
to high-Tc superconductivity

Track 3: Phase Phenomena and Electronic Phenomena

Session Chair: Daniel Prober, Yale University, USA
Session Co-Chair: Igor Tralle, University of Rzeszow, Poland

15:10-15:30 Ultrasensitive far-infrared / THz detection with graphene photodetectors
Dan Prober, Yale University, USA
Spin-singlet resonance state in proton-embedded metals: Discovery of novel high-T_K system leading

15:30-15:50 to high-Tc superconductivity
Yasutami Takada, University of Tokyo, Japan
15:50-16:10  Peculiar physical properties and material synthesis by self-organization
Tsuyoshi Takami, Osaka University, Japan

16:30-16:50  STM Prediction for Klein tunneling in graphene p-n junctions
Dian Shi, University of California, USA

16:50-17:50  Smart Materials
Ajay Kumar Mishra, University of South Africa, South Africa

Day 2 June 23, 2015
University A

Keynote Forum

09:00-09:30  Carol Heckman
Bowling Green State University, USA

09:30-10:00  Timothy R Field
McMaster University, Canada

Track 3: Phase Phenomena and Electronic Phenomena
Track 4: Magnetic Phases
Track 5: Quasiparticles and Soft Matter &
Track 6: Quantum Optics

Session Chair: Daniel Prober, Yale University, USA
Session Co-Chair: Igor Tralle, University of Rzeszow, Poland

10:00-10:20  Nematic-driven anisotropic electronic properties of underdoped detwinned Ba(Fe1-xCox)2As2
revealed by optical spectroscopy
L. Degiorgi, ETH - Zürich, Switzerland

10:40-10:50  Undulator-like radiation and cooperative phenomena in semiconductor microstructures with grating
Igor Tarel, University of Rzeszow, Poland

11:00-11:20  First-principles study of large spin-orbit coupling transition-metal compounds: electronic structure and new
possibilities
Myung Joon Han, Korean Advanced Institute of Science and Technology, South Korea

11:20-11:40  Biologically motivated computational toolbox for energy optimization of nanoelectronic systems
A F Isakov, Khalifa University, UAE

11:40-12:00  Unraveling the Physics of Strongly Correlated Electron Systems through Nuclear Magnetic Resonance
Nicholas Curro, University of California, USA

12:00-12:20  Pure spin current in a broad range of materials generated by YIG-based spin pumping
Fengyuan Yang, The Ohio State University, USA

12:20-12:40  The fate of quasiparticles at a Kondo destroying antiferromagnetic instability
Frank Steglich, Max Planck Institute for Chemical Physics of Solids, Germany

Lunch Break 12:40-13:40

13:40-14:00  Shaping the quantum wavepacket of free electrons
Ido Kaminer, Massachusetts Institute of Technology, USA

14:00-14:20  Nanoscale junctions utilizing magnetic thin-film edges
Hideo Kaiju, Hokkaido University, Japan

14:20-14:40  Neutron scattering investigations on multiferroic materials: Advances in polarized neutron utilization
Kazuhisa Kakurai, Quantum Beam Science Center, Japan Atomic Energy Agency, Japan
14:40-15:00  1H and 31P NMR spectroscopy of dynamic structures in nano- and mesostructured hydroxyapatites
Vytautas Balevicius, Vilnius University, Lithuania

Young Researcher Forum

15:00-15:20  Theory of metal/metal multi-contact interfaces: Implications of the coupling between the electrical and thermal transfer processes
N Foy, Universite de Picardie J. Verne, France

Turning electric and magnetic properties of hydrogen-terminated arm chair boron nitride nanoribbons by adsorption of Cr and Mn atom
Yusuf Zuntu Abdullahi, Universiti Sains Malaysia, Malaysia

16:00-17:30  Work Shop: Electronic Structure of Carbon Nano materials
Jan Smotlacha, Joint Institute for Nuclear Research, Russia

Coffee Break 15:40-16:00@Foyer

Day 3  June 24, 2015

University A

Workshop (Session B)

09:00-10:30  Work Shop: Electronic Structure of Carbon Nano materials
Jan Smotlacha, Joint Institute for Nuclear Research, Russia

Coffee Break 10:30-10:50@Foyer

Track 1: The States of Matter
Track 2: Phase Phenomena and Electronic Phenomena
Track 7: Organic Electronics
Track 8: Properties of Cellular Networks and Mesoscale Systems in Biology

Session Chair: Xiaoming Wen, University of New South Wales, Australia
Session Co-Chair: Fengyuan Yang, The Ohio State University, USA

10:50-11:10  Functional magnetic nanoparticles following Néel relaxation system for hyperthermia treatment
Yuko Ichiyanagi, Yokohama National University, Japan

Recent advances in nanocomposites
Ajay Kumar Mishra, University of South Africa, South Africa

Three-dimensional topological insulators - a new phase of quantum matter; growth issues and the properties of bismuth chalcogenides
Agnieszka Wolos, University of Warsaw, Poland

Photo-physics of organic semiconductors and a fundamental challenge for economic viability of organic solar cell technology
Lokendra Kumar, Purdue University, USA

Density dependent carrier dynamics in organic-inorganic metal halide perovskite
Xiaoming Wen, University of New South Wales, Australia

Quantum Spin Liquid, Topological Order and Entanglement Entropy
Hong-Chen Jiang, SLAC National Accelerator Laboratory and Stanford University, USA

Synthesizing hydrocarbons from carbon dioxide and water with metal nanostructures and solar energy
Mengyan Shen, University of Massachusetts Lowell, USA

Lunch Break 13:10-14:10@Foyer

2nd International Conference and Exhibition on Mesoscopic & Condensed Matter Physics

conferenceSeries.com  24-26 October 2016 Chicago, USA
2nd International Conference and Exhibition on

Mesoscopic and Condensed Matter Physics

October 26-28, 2016  Chicago, Illinois, USA

Scientific Program
## Keynote Forum

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:55-09:00</td>
<td>Introduction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:00-09:30</td>
<td>In-situ electron paramagnetic resonance studies of paramagnetic point defects in superconducting microwave resonators</td>
<td>Nathan Newman</td>
<td>Arizona State University, USA</td>
</tr>
<tr>
<td>09:30-10:00</td>
<td>Photonic applications with a protein complex</td>
<td>D V G L N Rao</td>
<td>University of Massachusetts, USA</td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>Theory of thermal expansion of magnetic superconductors</td>
<td>Rikio Konno</td>
<td>Kindai University Technical College, Japan</td>
</tr>
</tbody>
</table>

### Networking & Refreshment Break 10:30-10:50

### Sessions:

- **Condensed Matter Physics**
- **Bio-Physics and New Dimension in Technology**
- **Statistical Mechanics of Condensed Matter Systems**

**Session Chair:** Himanshu Verma, University of South Florida, USA  
**Session Co-chair:** Igor Tralle, University of Rzeszow, Poland

### Session Introduction

- **10:50-11:10** Scanning tunneling microscopy across a superconductor/topological insulator interface  
  **Stuart Tessmer**, Michigan State University, USA
- **11:10-11:30** Braiding of majorana fermions and topological quantum computation  
  **Louis H Kauffman**, University of Illinois at Chicago, USA
- **11:30-11:50** Electronic and magnetic behaviors of 2D atom-thin layers: Graphene, black phosphorus, hexagonal boron-nitride and MoS2  
  **Junji Haruyama**, Aoyama Gakuin University, Japan
- **11:50-12:10** Quantum entanglement in electron ballistic transport and jaynes-cummings model  
  **Igor Tralle**, University of Rzeszow, Poland
- **12:10-12:30** Mott-insulators vs. bipolaronic insulators in a deformable lattice and their transitions to metallic ground states by tuning the deformation potential  
  **Gayan Prasad Hettiarachchi**, Osaka University, Japan
- **12:30-12:50** The phase transition in cerium metal studied by an LDA + Gutzwiller method  
  **Haifeng Song**, Institute of Applied Physics and Computational Mathematics, China
- **12:50-13:10** Melting and transport properties of aluminium at high pressure from ab initio molecular dynamics simulations  
  **S C Wang**, Institute of Applied Physics and Computational Mathematics, China

### Lunch Break 13:10-14:00

**Title:** The properties of α and β-UH₃ under extreme conditions (stretching and compressing strains): An ab initio study  
**Hongzhou Song**, Institute of Applied Physics and Computational Mathematics, People’s Republic of China

### Panel Discussion

**Sessions:**

- **Solid State Physics and Crystallography**
- **Quantum Physics in Condensed Matter and Mesoscopic Physics**
Session Chair: C S Ting, University of Houston, USA
Session Co-chair: Rita John, University of Madras, India

14:20-14:40  Title: Novel electronic properties of hydrogenated graphene: The first principles calculations
            C S Ting, University of Houston, USA

14:40-15:00  Title: Theoretical investigation on 2D materials: graphene, silicene, germanene, and stanene
            Rita John, University of Madras, India

15:00-15:20  Title: The collective effect of magnetic holes of different dimensions in superparamagnetic continuum
            subjected to gradient magnetic field: A bireferegence study
            P M Trivedi, Bhavan’s Sheth R A College of Science, India

            Anamika Vitthal Kadam, D Y Patil College of Engineering and Technology, India

15:40-16:00  Title: Topological quantum states visualized by ARPES: From topological kondo insulator to Weyl semimetal
            Nan Xu, Paul Scherrer Institut, Switzerland

Networking and Refreshments 16:00-16:20

16:20-16:40  Title: Numerical modeling of exciton-light coupling in quantum wells
            Pavel Belov, Saint Petersburg State University, Russia

16:40-17:00  Title: Quantum computation with fibonacci anyons
            Claire Levaillant, University of California at Santa Barbara, USA

17:00-17:20  Title: Study of radiation effects on photoelectric and luminescence parameters of two-barrier structures
            based on silicon
            F P Abasov, Institute of Radiation Problems of NAS of Azerbaijan, Azerbaijan

17:20-17:40  Title: The thermodynamic and optical properties of diamond: A first-principles study
            Qili Zhang, Institute of Applied Physics and Computational Mathematics, China

Video Presentation

17:40-18:00  Title: Degeneracy and interference quantum effects in phase space distribution functions: Path integral approach
            A S Larkin, Joint Institute for High Temperatures-RAS, Russia

Panel Discussions

Day 2   October 27, 2016
Hall

Keynote Forum

08:45-09:15  Title: Exploration of intermediate phases of matter on surfaces
            Michael W Roth, Northern Kentucky University, USA

09:15-09:45  Title: Topological phase transitions and a two-dimensional Weyl superconductor in a superconductor/half-metal
            heterostructure
            C S Ting, University of Houston, USA

Session: Nano and Mesoscopic Scale
Session Chair: Elie. A Moujaes, Federal University of Rôndonia, Brazil
Session Co-chair: Yuko Ichiyanagi, Yokohama National University, Japan

Session Introduction

09:45-10:05  Title: Fundamental mechanisms that determine the loss tangent and temperature coefficient of resonant frequency (\(\tau_f\)) in modern microwave ceramic dielectrics
            Nathan Newman, Arizona State University, USA

10:05-10:25  Title: Strongly localized isolectric impurities for synthesizing novel semiconductor alloys
            Kirstin Alberi, National Renewable Energy Laboratory, USA
Title: Local structure analysis and biomedical applications of multifunctional magnetic nanoparticles

Yuko Ichiyanagi, Yokohama National University, Japan

10:25-10:45

Networking & Refreshment Break 10:45-11:05

Title: Magnetization of ultrathin [Fe1-cNic]n alloy nanojunctions between Fe or Co leads using an EFT-MFT model

Elie A Moujaes, Federal University of Rondonia, Brazil

11:05-11:25

Title: Electronic structure of graphene wormhole and graphitic nanocone

Jan Smotlacha, Joint Institute for Nuclear Research, Russia

11:25-11:45

Title: Synthesis and characterization of Zn-substituted lithium cobalt ferrite using sol-gel auto combustion for a cathode material in lithium ion batteries

Mukhtar Ahmad, COMSATS Institute of Information Technology, Pakistan

11:45-12:05

Title: Transport properties of “man-made” crystalline: Semiconductor superlattice

M Kofoworola Awodele, Ladoke Akintola University of Technology, Nigeria

12:05-12:25

Title: Synthesis and characterization of Zn-substituted lithium cobalt ferrite using sol-gel auto combustion for a cathode material in lithium ion batteries

Mukhtar Ahmad, COMSATS Institute of Information Technology, Pakistan

12:25-12:45

Title: Enhancement of sensitivity in gas chemiresistors based on carbon nanotube surface functionalized with substituted phthalocyanines

Anshul Kumar Sharma, Guru Nanak Dev University, India

12:45-13:05

Lunch Break 13:05-14:00

14:00-14:20

Title: AFM controlled studies of nanoscale polymeric spheres on a Si substrate

Himanshu Verma, University of South Florida, USA

14:20-14:40

Title: Emission, structure and aging of silver doped ZnO nanorod films

T V Torchynska, Instituto Politecnico Nacional, Mexico

14:40-14:51

Panel Discussion

Session: Meta Materials and Magnetic Materials

Session Chair: Roberto Zivieri, University of Ferrara, Italy

Session Co-chair: Rikio Konno, Kindai University Technical College, Japan

14:51-14:53

Session Introduction

14:53-15:15

Title: 2D ferromagnetic nanostructures: A new class of metamaterials

Roberto Zivieri, University of Ferrara, Italy

15:15-15:35

Title: Theory of thermal expansion of heavy fermion systems

Rikio Konno, Kindai University Technical College, Japan

15:35-15:55

Title: New types of composite metamaterials

Pawel Zieba, University of Rzeszow, Poland

15:55-16:15

Networking & Refreshment Break 15:40-16:00

16:00-16:20

Title: Impact of CuZn on structural, morphological and magnetic properties of spinel nanocrystalline ferrites for variety of applications

Majid Niaz Akhtar, COMSATS Institute of Information Technology, Pakistan

16:20-16:40

Title: Titanium doped semiconductor microring laser on optical fibers

Muhammad Maqbool, Ball State University, USA

16:40-17:00

Title: Large-scale Bose-Einstein condensation in a vapor of sodium atoms at normal temperature (T=343K)

Pei Lin You, Guangdong Ocean University, China

16:40-17:00

Video Presentation
### Sessions:
- **Superconductivity and Superfluidity**
- **Organic Electronics**
- **Theoretical and Experimental study of Soft Matter**

**Session Chair:** Ranjan Chaudhury, S N Bose National Center For Basic Sciences, India

**Session Co-chair:** Myung Joon Han, KAIST Institute for interdisciplinary research, Korea

<table>
<thead>
<tr>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>09:30</td>
<td>The rich landscape of organic molecules on graphitic surfaces: What molecular dynamics shows</td>
<td>Michael W Roth</td>
<td>Northern Kentucky University, USA</td>
</tr>
<tr>
<td>09:50</td>
<td>Reduced dimensionality and emerging material property in perovskite oxide superlattices: A first-principles study</td>
<td>Myung Joon Han</td>
<td>Korea Advanced Institute of Science and Technology, Korea</td>
</tr>
<tr>
<td>10:10</td>
<td>Spin superfluidity in the frustrated two-dimensional anisotropic XY model</td>
<td>Leonardo dos Santos Lima</td>
<td>Centro Federal de Educação Tecnológica de Minas Gerais, Brazil</td>
</tr>
<tr>
<td>10:30</td>
<td>Functional oxide nanoarchitectures for emerging energy and clinical technologies</td>
<td>Oommen K Varghese</td>
<td>University of Houston, USA</td>
</tr>
<tr>
<td>10:50</td>
<td>Effect of metal-ions (Sn and Li) doping on the structural, optical and gas sensing properties of In$_2$O$_3$ nanocrystalline thin films</td>
<td>S N Pandey</td>
<td>Motilal Nehru National Institute of Technology, India</td>
</tr>
<tr>
<td>11:10</td>
<td>Local properties study of substituted Sr-Ca-Cu-O superconducting structure</td>
<td>A Sklyarova</td>
<td>Nagaoka University of Technology, Japan</td>
</tr>
<tr>
<td>11:50</td>
<td>Microscopic understanding of high temperature superconductivity and its possible role towards enhancement of critical temperature</td>
<td>Ranjan Chaudhury</td>
<td>S N Bose National Center For Basic Sciences, India</td>
</tr>
<tr>
<td>12:10</td>
<td>Dielectric relaxation study and molecular interaction of amides in 1, 4-dioxane by using time domain reflectometry</td>
<td>Gajanan Ramrao Mahajan</td>
<td>Shri Datta Arts, Commerce and Science College, India</td>
</tr>
<tr>
<td>12:30</td>
<td>Morphological studies of virgin and ion irradiated nanostructured BaF$_2$ thin films surfaces</td>
<td>S N Pandey</td>
<td>Motilal Nehru National Institute of Technology, India</td>
</tr>
<tr>
<td>12:50</td>
<td>Electron-phonon interaction in nanostructures at sub-Kelvin temperatures</td>
<td>Dragos Victor Anghel</td>
<td>Institutul National de Cercetare-Dezvoltare pentru Fizica si Inginerie Nucleara Horia Hulubei, Romania</td>
</tr>
</tbody>
</table>

**Networking & Refreshment Break 15:40-16:00**

### Award and Closing Ceremony

**3rd International Conference and Exhibition on Condensed Matter Physics and Materials**

*October 16-18, 2017*  
*Atlanta, USA*

**4th International Conference and Exhibition on Theoretical and Condensed Matter Physics**

*November 6-7, 2017*  
*Toronto, Canada*

E-mail: condensedmatter@physicsconferences.org; condensedmatterphysics@conferenceseries.net  
Website: condensedmatterphysics.conferenceseries.com/