



European Materials Research Society

Spring Meeting 2016

From May 2nd to 6th
Lille Grand Palais - France

Call for papers

deadline for abstract submission:

15 January 2016

www.european-mrs.com

Materials

- A** Hybrid materials: from the laboratory to the market
- B** Adaptive materials: devices and systems towards unconventional computing, sensing, bio-electronics and robotics
- C** Laser-material interactions for tailoring future applications
- D** Solid state ionics: defect interactions and their influence on ionic and electronic transport
- E** Substitution of critical raw materials: synthesis, characterization and processing of new advanced materials in optoelectronic and magnetic devices
- F** Advanced materials for printing
- G** Molecular systems for spintronics
- H** Tailored disorder - an advanced materials design for innovative photonic applications
- I** Functional oxynitride films for sustainable development
- J** Established and emerging nanocolloids: from synthesis & characterization to applications II

Semiconductors

- K** Group IV semiconductors materials research - growth, characterization and applications to electronics and spintronics
- L** Wide bandgap materials for electron devices
- M** Silicon compatible materials and integrated devices for photonics and optical sensing
- N** Materials frontier for transparent advanced electronics II (E-MRS / MRS-J bilateral symposium)
- O** Group IV semiconductors at the nanoscale - towards applications in photonics, electronics and life sciences

Biomaterials

- P** Carbon materials: surface chemistry and biomedical applications II
- Q** Smart biointerfaces for functional biomaterials
- R** Multifunctional nanostructures for diagnostic and therapeutic of diseases
- S** Biomimetic bioactive biomaterials – the next generation of implantable devices

Energy

- T** Advanced materials and characterization techniques for solar cells III
- U** Materials by design for energy applications
- V** Thin film chalcogenide photovoltaic materials
- W** Materials and systems for micro-energy harvesting and storage
- X** Functional materials for environmental sensors and energy systems

Nanomaterials

- Y** Graphene and related materials: from fundamental science to applications
- Z** Two dimensional crystals and van der Waals heterostructures for nanoelectronics
- AA** Solution processing and properties of functional oxide thin films and nanostructures II
- BB** Defect-induced effects in nanomaterials
- CC** In situ studies of functional nano materials at large scale facilities: from model systems to applications
- DD** Light interaction with nanomaterials
- EE** Carbon- or nitrogen-containing nanostructured thin films

Workshops & Tutorials

- FF** Sustainable knowledge and preservation of Cultural Heritage for future generations
- GG** Advanced materials and technologies for renewable energies - AMREN-2 (5 - 6 May 2016)
- HH** Function-assembly of nano-materials towards electronics, energy and biological applications (one day symposium)

Symposium W

Materials and systems for micro-energy harvesting and storage

Internet of Things and Trillion Sensors are buzzwords illustrating the next grand paradigm: Smart Anywhere. In many of those distributed sensing and intelligence realizations long term autonomy of systems will be a must. Micro-energy autonomy solutions based on the combination of energy harvesting and storage may play a decisive role.

Scope

Energy autonomy keeps being one of the most desired functionalities in the context of off-grid applications, such as wireless sensor networks, mostly being served by primary batteries. However, battery replacement will eventually become impractical (economically, environmentally, and logistically) not only for sensor networks in remote places or harsh environments, but also for more standard applications when the number of nodes explodes exponentially as current forecasts point to. Harvesting energy, tapping into environmentally available sources such as heat and vibrations, may be a good solution in different scenarios. Furthermore, coupling those harvester devices to storage devices to buffer enough energy to account for power demand peaks could be a quite enabling energy autonomy solution.

The success of those solutions will depend on material performance, including nanofeatures, but also on their integration capability in small dimension devices (few cm² or cm³ at most) and adaptability to different large volume / low cost fabrication schemes such as silicon technology or flexible substrates. This will bring additional challenges on material/process compatibility and adequacy to extreme (3D) architectures. Enabling technologies such as advanced materials, nanotechnology, and micro and nanoelectronics are called to be protagonists of such continuous monitoring scenarios and distributed intelligence paradigms.

Examples of topics to be covered by the symposium

- Materials and system issues for thermal energy microharvesters
- Materials and system issues for mechanical energy microharvesters
- Materials and systems issues for microbatteries
- Materials and system issues for micro supercapacitors

Scientific committee:

- Adrian Ionescu, EPFL, Switzerland
- Alberto Roncaglia, IMM-CNR, Italy
- Nathan Jackson, Tyndall, Ireland
- Eric Yeatmann, Imperial College, UK
- Albert Tarancón, IREC, Spain
- Yaniv Gelbstein, Ben Gurion University, Israel
- Aljoscha Roch, Fraunhofer IWS, Germany
- Alexander Bismarck, Vienna University, Austria
- Frédéric Le Cras, CEA, France

Invited speakers:

- Zhong L. Wang, Georgia Tech, USA (tentative)
- Robert Hahn, Fraunhofer IZM, Germany
- David Pech, LAAS, France
- Mika Prunnila, VTT, Finland
- Gabi Schierning, Duisburg University, Germany
- Marlies Van Bael, Hasselt University, Belgium
- Peter Woias, IMTEK, Germany
- Maziar Ahmadi, LEITAT, Spain
- Jan König, Fraunhofer IPM, Germany
- Ola Nilsen, University of Oslo, Norway
- Elie Lefevre, Université Paris-Sud, France

Publication:

Papers of this symposium will have the chance to be published in the Energy Harvesting and Systems Journal (De Gruyter)

Support:

This symposium is supported by the following EU projects that are receiving funding from the European Union Seventh Framework Programme: SINERGY (GA n°604169), NanoCaTe (GA n°604647), MATFLEXEND (GA n°604093), MANpower (GA n°604360)

Symposium organizers

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A description of each symposium is given in this announcement. Any information regarding a specific symposium can be obtained by contacting the symposium organizers. For general information regarding the conference contact the E-MRS Headquarters or visit www.european-mrs.com

CONFERENCE SECRETARIAT

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Conference language is English.

CONFERENCE VENUE

The Conference will be held at the **Congress Center "Lille Grand Palais"**, 1 Boulevard des Cités-Unies, Lille, France **from May 2 to May 6, 2016.**

For more information about Lille Grand Palais please visit <http://www.lillegrandpalais.com/>
All the conference symposia will be held in the same building.

HOTEL RESERVATION

Génération Voyages is the **official and exclusive** agent appointed by the organiser of E-MRS to manage with hotel bookings.
For further information, www.congres-generationvoyages.com

VISA ASSISTANCE

Citizens having passports from certain countries need a visa to enter France. If you need any assistance to obtain your visa, please contact us, as soon as possible (indicate us your address, date and place of birth and your passport number and date of expiration):

By email nathalie.geyer@european-mrs.com
Subject: VISA ASSISTANCE

All letters of invitation will be sent by airmail and by PDF e-mail attachment unless a courier account number is provided with the original request. E-MRS is not able to contact Embassies in support of an individual attempting to gain entry to attend the meeting. Because the application for a visa can be a lengthy process, we recommend that you start your visa application process as soon as you have been notified that your paper has been accepted. We also recommend that you secure your travel visa before registering for the symposium.

MANUSCRIPTS AND PROCEEDINGS

Depending on the symposium, a selection of full length papers will be published as special issues in appropriate journals. Submitted papers will be refereed to journals standards. Instructions to authors will be dispatched together with the notification of acceptance of the abstract.
The decision of which journals shall publish the symposia proceedings will be made jointly by symposium organizers and journal editors. An announcement of these journals will be published online.

FINANCIAL SUPPORT

Limited possibilities for financial support exist within the budget of each symposium. For any request of funding, please contact directly the chairpersons of your symposium.

ABSTRACT SUBMISSION

Deadline for abstract submission: January 15, 2016. In fairness to all potential authors, late abstracts will not be accepted

Abstract Length: Web submissions are limited to 1500 characters. (only plain text, no figures, no formulae...)

Note: All abstracts must be submitted via the E-MRS website www.european-mrs.com

Submitting abstracts via the E-MRS Web site is easy and convenient. Follow the easy step-by-step instructions on the template, making sure that complete mailing address information is included for the presenting and contact authors. After submitting your abstract, please use your Control ID number in all communications with E-MRS regarding the abstract UNTIL a paper number (e.g., A-IV.8) is later assigned.

Because major revisions may affect a symposium

sium organizer's decision to accept your abstract, please review it carefully before submission. In the unusual circumstance of having to revise your original abstract, the online submission center enables authors to revise their abstracts up to and including the submission deadline of January 15. After that date, the change must be submitted to: emrs@european-mrs.com (Subject: Abstract Revision) and must include your Control ID number. Please state exactly where the revisions are located (e.g., title, author, body, etc.).

Papers will be selected by the scientific committee of each symposium.

Authors will be notified of acceptance and mode of presentation by February 25, 2016 at the latest.

REGISTRATION

Join us in Lille for the 2016 E-MRS Spring Meeting and Exhibition — a leading forum for scientists and engineers to exchange information and ideas at the forefront of materials research.

Online registration: www.european-mrs.com open from February 1 to April 18, 2016

EVERY ATTENDEE MUST REGISTER ONLINE (including symposium chairpersons, invited speakers, scientific committee members, presenting authors, authors, ...).
Abstract acceptance and conference registration are 2 separate things.

On-site payment hours

Monday May 2 / 7.30 - 18.00

Tuesday May 3 / 8.00 - 18.00

Wednesday May 4 / 8.00 - 18.00

Thursday May 5 / 8.00 - 18.00

Friday May 6 / 8.00 - 17.00

Please register online before April 18, 5 pm (CET)
If you do not have an E-MRS account on our website, you need to create one before registering to the Spring Meeting.

PRE-REGISTRATION IS COMPULSORY & PRE-PAYMENT IS RECOMMENDED to avoid a long queue. For organizational reasons, on-site registration will be limited.

REGISTRATION FEES

1. FULL RATE

Including: access to symposia, lunches, coffee breaks, social event, E-MRS membership for one year and one proceedings volume (if applicable).

BEFORE March 21, 2016: 560 Euro net

AFTER March 21, 2016: 660 Euro net

2. STUDENT RATE

Including: access to symposia, lunches, coffee breaks, social event, E-MRS membership for one year. Students have to give evidence of their university registration at the registration desk.

BEFORE March 21, 2016: 310 Euro net

AFTER March 21, 2016: 390 Euro net

E-MRS is a non-profit organization and is not subject to VAT.

ON-SITE REGISTRATION

Attendees can also register on-site at the Congress Center "Lille Grand Palais. On-site registration opens Monday May 2 at 7:30 am

IMPORTANT: On-site registration does not include any conference pack (bag, printed version of the conference program, USB stick, ...). It includes only the access to symposium rooms, the lunches, coffee breaks and the social events.

On-site registration will be available for the duration of the meeting.

PAYMENT OF FEES

Payment should be made in EURO for the net total amount due. The following possibilities are offered:

- Credit card (Carte Bleue, Visa, Eurocard/ Mastercard) (mode preferred)

- Bank transfer:

Bank: BANQUE POPULAIRE ALSACE LORRAINE CHAMPAGNE

Address: CRONENBOURG MITTEL

Account: ASS. EMRS CONFERENCES

IBAN : FR76 1470 7500 1111 1913 8543 942

BIC : CCBPFRPPMTZ

Make sure to well identify your transfer by indicating your ID Number and your name and first name

- Purchase order (bon de commande) to be sent by April 4, 2016 at the latest

- Cash (on-site payment only)

CANCELLATION

In case the E-MRS conference is cancelled, the conference attendees will be entitled to claim the reimbursement of the registration fee. In no case can the Conference Organisers be held liable for the reimbursement of any other cost, such as travel costs, accommodation costs, living expenses etc. Such costs are the exclusive responsibility of Conference attendees.

In order to receive a refund, cancellation requests must be in writing and sent by April 30, which will cause a €25 processing fee. No refunds will be issued on requests postmarked after April 18. In recent years, there has been a move away from long scary disclaimers of liability for acts of God, terrorism, strikes, volcano eruption etc., so these are no longer included.

CONFERENCE SCIENTIFIC PROGRAM

The complete scientific program will be available starting March 2016 on the E-MRS website: www.european-mrs.com

POSTER PRESENTATION

The maximum size for the poster is: vertical 1.10 m and horizontal 0.90 m. The poster board will be full white board. Pins are not allowed, please use tape. Attendees can preview the posters during the morning before the formal presentation.

Authors need to be present at their posters for discussion with attendees during the session. Subse-

quently, it is each author's responsibility to remove his/her poster immediately at the end of the session. E-MRS assumes no responsibility for posters left up after this time. A printing office will welcome you on site and will give you the opportunity to print your poster at reasonable cost

GRADUATE STUDENT AWARDS

E-MRS announces the availability of awards (up to 2 per symposium) for graduate students conducting research and a topic to be addressed in the symposia planned for the E-MRS 2016 Spring Meeting. Each award will consist of a cash grant of 450 Euro, that will be offered during the plenary session jointly to a diploma.

Criteria for selection are:

- Participation at the E-MRS 2016 Spring Meeting as an attendee and author or co-author of a symposium paper.

- Outstanding performance in the conduct of this project and promise for future substantial achievement in materials research as judged by the faculty advisor.

- Significant and timely research results.

Application materials required:

- Application form under www.european-mrs.com

- Abstract of paper to be presented at the meeting

- Letter of support from research supervisor.

Submit the complete application to the E-MRS Secretariat. Deadline for complete application is April 5, 2016.

Winners will be notified directly by the concerned symposium organizer.

E-MRS Graduate Student Award Winners must be present during the plenary session to get their prizes.

EU-40 MATERIALS PRIZE

This E-MRS award is given to recognize outstanding contributions to materials research by a scientist under 40. The award is reserved to researchers showing exceptional promise as leaders in the materials science having performed the research for which this prize is awarded while working in Europe. The award consists of a 5,000 Euro cash prize, a certificate, waiver of the meeting registration fee and a plenary talk at the 2016 Spring Meeting where the award will be presented.

Nominations should include:

- Curriculum Vitae including birth date
- List of key publications (including citations and impact factors)
- Letters of support from two well established scientists

Any additional supporting information relevant to the award

The nomination package should not exceed 10 pages (excluding the list of key publications) and should be sent by email at emrs@european-mrs.com (subject: eu40materials) before the 29 February 2016.

The nominee shall not have reached his/her 40th birthday in the year in which the nomination is submitted (2015).

PLENARY SESSION

A plenary session is scheduled on Wednesday May 4, 2016 - afternoon.

During this session, the EU-40 Materials Prize as well as the Graduate Student Awards will be delivered.

CONFERENCE RECEPTION – SOCIAL EVENT

All participant are invited to attend the Conference reception on Wednesday May 4, 2016 at 19:30. Enjoy drinks and food while listening to live music! It is a chance to meet and renew relationships with colleagues. The participation is free of charge.

IMPORTANT DEADLINES

• January 15, 2016:

Deadline for abstract submission.

• February 25, 2016:

Notification of acceptance and mode of presentation.

• February 29, 2016:

Deadline for EU-40 Materials Prize nomination.

• March 21, 2016:

Deadline for Pre-Registration fees. (only applicable for REGISTRATION AND PAYMENT received by March 21, 2016).

• After March 21, 2016:

Regular registration fees.

• April 5, 2016:

Deadline for completed Application for Graduate Student Awards.

• April 15, 2016:

Deadline for Reach Out! Award application.

• April 18, 2016:

Deadline for online registration. (ATTENTION: on-site registration will be limited !!)