Sujet : [GDR-NAME] NewsLetter February 2025
De : "Konstantinos Termentzidis" (via gdr-name Mailing List) <gdr-name@services.cnrs.fr>
Date : 12/02/2025, 10:50
Pour : gdr-name <gdr-name@services.cnrs.fr>

GDR-NAME Winter Newsletter

February, 2025

NAME

GDR Nanomaterials for Energy Applications

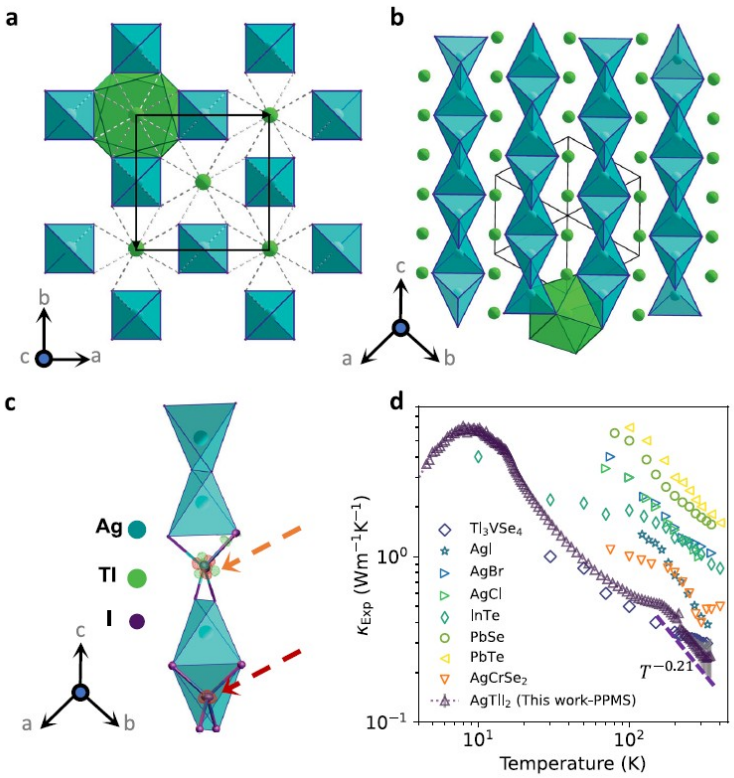
EDITO

Dear GDR members
First we would like to apologize for such a long News Letter silence..Now, we are back on track with even more energy !
The important events that are to come for the GDR in 2025 are first the Plenary session organized in Paris-Saclay by Jérôme Saint Martin and and other GDR members from the Paris-Saclay Plateau). It will be held most probably end of november It will be held most probably between 12th and 15th of November 2025. The second important event is the renewing of the GDR NAME for five years, with some changes in the management group of the GDR.
In this Newsletters, you will find, as usual, scientific highlights, information about thesis prices, some conference announcements. We will pay tribute to Natalio Mingo, colleagues from our

community, who died early september 2024.
We wish you a nice beginning of the year with lots of snow and scientific results.

LINK

IMAGE OF THE MONTH



Pushing thermal conductivity to its lower limit in crystals with simple structures

Materials with low thermal conductivity usually have complex crystal structures. Here the authors experimentally find that a simple crystal structure material $AgTlI_2$ owns an extremely low thermal conductivity of 0.25 W/mK at room temperature. Intriguingly, unlike many strongly anharmonic materials where a small propagative thermal conductivity is often accompanied by a large diffusive thermal conductivity, they find an unusual coexistence of ultralow propagative and diffusive thermal conductivities in $AgTlI_2$ based on the thermal transport unified theory. This study underscores the potential of simple crystal structures in achieving low thermal conductivity and encourages further experimental research to enrich the family of materials with ultralow thermal conductivity.
See Zeng et al *Nature Communications* **volume 15**, Article number: 3007 (2024)

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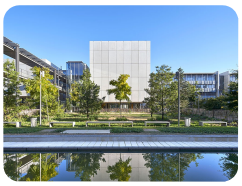
GDR-NAME NEWS

Calls for interlab project and thesis price of the GDR



Interlaboratory project 2025

The inter-laboratory projects aim to promote new collaborations within the GDR. The application deadline for this call is March 31, 2025. As a reminder, this call to GDR member laboratories allows funding for scientific exchanges between its members. These exchanges of students (e.g.: interns) or researchers must make it possible to initiate a collaboration or, less importantly, to support already existing collaborations. Application file: The collaboration proposal must be 2 pages maximum, presenting the state of the art, the scientific objective, the people involved (funding of internships possible) and the detailed budget spread over a maximum of 12 months.
At least 2 teams from different GDR laboratories must be involved. The target budget must be around €1500 to €5000, the proposal has to be sent to gdr-name-request@services.cnrs.fr

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Thesis price 2025

The thesis price call for 2025 is now open. Here are the rules !!
Eligibility conditions: Thesis defended between 01/01/2024 and 31/01/2025.
Thesis subject included in one of the following themes: collection/recovery, conversion/recycling, management or storage of energy.
Selection criteria: Thesis concerning the development of a technique or instrument dedicated to the characterization and/or development of materials for energy, Thesis dedicated to the study of a new physical phenomenon of transport at the nanometric scale and which can be exploited in the longer term in applications related to the themes mentioned above. In both cases, the originality and the scientific and technological benefits of the work will be considered.
You'll find all the required information on the website link below.

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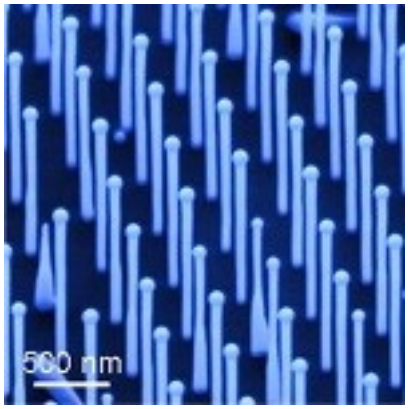
Breaking news of the GDR



Good news: GDR Renewal for 5 years till 2030

2024 will be the last year of GDR NAME. It is a good occasion to thank the steering commitee for its action and all the members for their active participation to the White Book, organisation of events etc...
The renewal application has been accepted for 2025-2030, congrats to all GDR members for their efforts !

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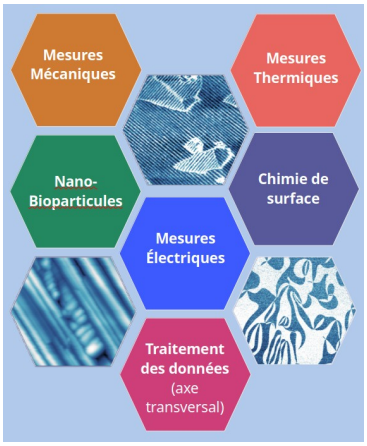
Welcome to a new GDR in 2024 CARMANANO



A new GDR dedicated to metrology at the nanoscale

Created in January 2024, the GDR CarmaNano (Characterization and Measurements at the nanoscale) aims to connect experts in spatially resolved characterization techniques at the nanometer scale in order to: 1-establish an inventory of the performance and sources of error of measuring instruments and situate them on a scale of metrological maturity 2-move towards quantitative dissemination of good measurement practices coupling instruments and skills 3-invent new data processing techniques

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Successfull plenary days of the GDR NAME in LILLE

Thanks to Jean-François ROBILLARD the plenary days were more than a success as more than 80 people of the GDR attended the event. Many wonderful talks were given permitting lots of scientific discussions and exchanges.

Thesis price 2024 to Paul Dalla

Valle: congratulations !!

Paul Dalla-Valle did his thesis work in the lab IM2NP group NQS on « Modeling innovative devices based on van der Waals heterojunctions for nanoscale energy management ».

Obituary: tribute to Natalio MINGO

Natalio Mingo founded the Materials Theory group at CEA-Liten in Grenoble in 2007. Prior to this appointment, he was a scientist at NASA Ames Research Center in California (2000-2006). He has been the principal investigator of numerous research projects funded by, among others, the US National Science Foundation, NASA, and the EU.
Since 2000, he focused on initiating the new field of ab-initio thermal transport, having also introduced high-throughput and machine learning approaches in this field. Some of his main scientific contributions concern nanostructured thermoelectrics, notably on the concept of Nanoparticle Embedded in Alloy Thermoelectric (NEAT) materials, and the theoretical understanding of thermal transport in nanowires. Another influential part of his research concerns low-dimensional materials, notably graphene. He is the creator of shengBTE, an open source software capable of predicting the thermal conductivity of periodic crystals without using tunable parameters. More recently, he has published almaBTE, which contains all the capabilities of shengBTE and extends them to inhomogeneous materials, in a completely new and more powerful implementation.
He died at the age of 54 last year. We extend our condolences to his family.

GDR-NAME Events

SAVE THE DATE !!! Next Plenary

meeting of the GDR NAME will be held in Paris Saclay in November 2025

The plenary days of the GDR NAME will be organized in ENS Paris-Saclay mid Novembre 2025. Many thanks to Jérôme Saint-Martin from Ecole Normale Supérieure Paris Saclay for the organisation.

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ANNOUNCEMENTS

Events, schools, Conferences, workshop etc...!!!

TOTEMIC Training School 2025: "Tools for Energy Materials Modelling Acceleration"

20-26 April 2025 - Cargese, Corsica, France

TOTEMIC Training School

TOTEMIC aims to explore the critical role of materials science in the ecological transition and raise awareness within the scientific community about the new paradigm of AI integration in materials development. This event will delve into the intersection of materials science, artificial intelligence, and multi-scale modeling.

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13th National Days on Energy Harvesting and Storage

Annecy, June, 10th – 11th, 2025

SYMME · POLYTECH ANNECY-CHAMBÉRY · UNIVERSITÉ SAVOIE MONT BLANC · NAME GDR NAnoMaterials for Energy applications · La Région Auvergne-Rhône-Alpes

National days on Energy Harvesting and Storage ANncy 10th to 11th of june2025

These days aim to bring together researchers working on energy conversion, recovery and storage, particularly on a small scale, as well as on the design of complete energy-autonomous systems. Invited lectures by French and foreign researchers, experts in these fields, bring an international character to the conference (all presentations will be in English).
Submission of manuscrit till 11th of april 2025

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Phononics 2025: 7th International Conference on Phononic Crystals/Metamaterials, Phonon Transport, Topological Phononics

Seoul Olympic Parktel, Seoul, Korea

June 9, 2025 – June 13, 2025

Phononics 2025, the 7th International Conference on Phononic Crystals/ Metamaterials, Phonon Transport, and Topological Phononics will be hosted by Seoul National University in Seoul, South Korea. The field of phononics continues to grow at a rapid pace. After over 30 years of scientific and technical advances and the advent of (a) new fabrication and manufacturing techniques such as additive manufacturing, (b) revolutionary advances in data science including artifical intelligence, and (c) broader range of potential applications from earthquake mitigation to thermoelectric energy conversion, the field is at the doorsteps of a new era of technological and societal impact. Phononics 2025 will address the challenges and opportunities that promise transformative advancements in knowledge and performance of phononic materials and structures. The conference will encourage exchange of innovative, forward-looking, and interdisciplinary ideas as well as exchange of cutting edge methods and practices.

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The 9th International Symposium on Structure-Property Relationship in Solid State Materials (SPSSM-2025) will be held in Nantes, France, from Sunday, July 6th to Friday, July 11th 2025

Specifically, SPSSM-2025 will serve as a global platform for the presentation and discussion of recent research findings concerning solid-state materials. Our primary objective is to delve into the intricate relationships between structural nuances, chemical compositions, and the distinct physical properties exhibited by these materials. Additionally, we aim to explore methodologies for altering these properties through adjustments in chemical bonding, electron-electron interactions, dopant concentrations, and defect engineering.
It's imperative to highlight that the symposium has been meticulously structured to foster collaboration and knowledge exchange among experimental and theoretical solid-state chemists, physicists, and materials scientists.
You have the opportunity to submit a proposal for an oral presentation (20 minutes including discussion) or a poster. For the case of poster presentation, please prepare a 3-minute long video that will be uploaded on the website. This symposium is aimed at encouraging collaborations, inspiring innovations, and encouraging the exchange of knowledge and ideas between senior scientists and junior researchers.

LINK

PHONON 2025 is organized in Buenos Aires in ARGENTINA from 1st to 5th of december 2025.

honons 2025 will be the 18th edition of a distinguished conference series dedicated to presenting the most prominent results in phonon physics. This

18th International Conference on Phonon Scattering in Condensed Matter will be held in Buenos Aires, Argentina, and continues the last two conferences held in Paris, France, in 2023 and Nanjing, China, in 2018.
Phonons 2025 will feature plenary sessions on the latest developments, parallel oral sessions with invited talks on key topics, poster sessions, and social events to encourage discussions within the phonon physics community.

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You have received this email because you have subscribed to the GDR mailing list.
Don't forget to submit your announcements, proposals for highlights, image of the month, information of all types... Thank you!

N A M e
GDR Nanomaterials for Energy Applications

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Dr. Olivier Bourgeois (PhD)
Directeur de Recherche Institut Néel/CNRS-Université Grenoble Alpes
Equipe Thermodynamique des Petits Systèmes
25 avenue des Martyrs
BP 166
38042 Grenoble Cedex 9
France
Salle E218, Bureau E412
Tel : Bureau (33) 4 76 88 12 17
Port./cell. (33) 6 88 71 51 86
Manip (33) 4 76 88 78 35
Fax : (33) 4 56 38 70 87
visit the web site : https://neel.cnrs.fr/equipes-poles-et-services/thermodynamique-et-biophysique-des-petits-systemes-tps
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