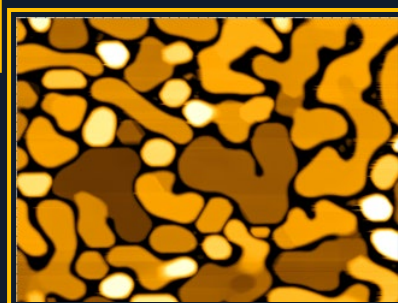
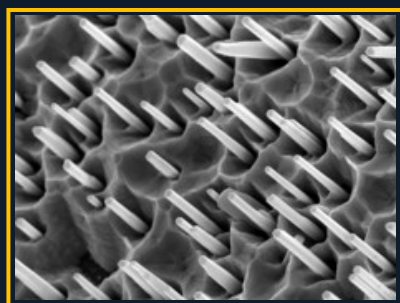
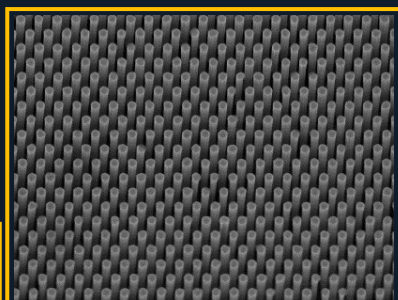
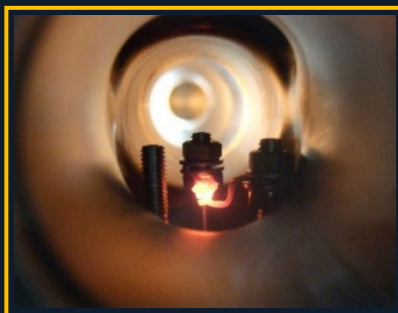
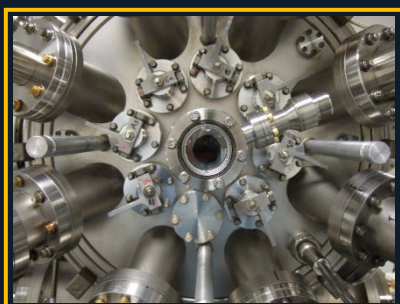


EUROPEAN NETWORK FOR INNOVATIVE AND ADVANCED EPITAXY

OPERA will build a new and innovative European Network composed of expert communities in epitaxial growth focusing on different materials classes: conventional semiconductors, oxides and 2D materials.

"Bringing researchers and innovators together"



For more information, please consult the OPERA COST ACTION website:

<https://cost-opera.eu/>

MBE reactor (Top left), Vacuum (Center): **Gavin Bell**, University of Warwick

Selective area growth of GaN nanowires (Top right): **Sergio Fernández**, Autonomous University of Madrid

Self-assembled GaN nanowires via MBE (Bottom left): C2N/CNRS/ Paris Saclay University

AFM image of the MESA structure of MBE grown Rhenium thin film (Bottom right): **Tanbir Kaur Sodhi**, Paris Saclay University

EUROPEAN NETWORK FOR INNOVATIVE AND ADVANCED EPITAXY

SUMMARY

Page 1

- Editorial

Page 2

- Description of COST-OPERA ACTION
- Important contacts

Page 3-6

- Main events organized by the COST Action

Page 6-9

- Upcoming schools and conferences

Page 10-11

- Open PhD and post-doc positions

Page 10

- Related Information



34 European COST countries
3 Near-neighbouring countries
3 international partners

OPERA • COST ACTION CA20116

EUROPEAN NETWORK FOR INNOVATIVE AND ADVANCED EPITAXY

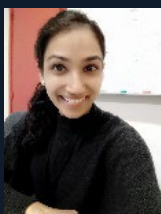
Dear all,

Welcome to the first digital Opera-Cost Action newsletter edited by the students, for the students.

Initiated by a French consortium, it is a new and innovative European Network composed of expert communities in advanced epitaxial growth of different material classes. With primary focus on the diffusion of upcoming events, research activities, and job positions amongst our fellow colleagues and researchers, we also highlight the main objectives of the OPERA- COST ACTION. We aim to actively circulate the novelties in the field of epitaxy amongst the students and offer them the chance to network within and beyond the existing epitaxial community, thus pushing forth the merger of researchers with a common interest in epitaxy but different areas of expertise.

Sincerely,

Editorial team.



Tanbir Kaur SODHI, Ph.D.
Centre de Nanosciences et de Nanotechnologies (C2N), France
tanbir.sodhi@universite-paris-saclay.fr



Dr. Alla Chikina, Postdoc
Paul Scherrer Institute (PSI), Switzerland
alla.chikina@psi.ch



Sherif Kamal, Ph.D
Institut za fiziku, Croatia
skamal@ifs.hr

OPERA • COST ACTION CA20116

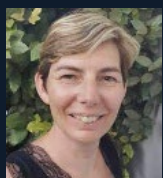
EUROPEAN NETWORK FOR INNOVATIVE AND ADVANCED EPITAXY

The COST Action “European Network for Innovative and Advanced Epitaxy”, named OPERA, will build a new and innovative European Network composed of expert communities in epitaxial growth focusing on different materials classes: conventional semiconductors, oxides and 2D materials. It aims to bridge the gap between traditionally separated scientific communities, both academic and industrial, having the common goal to combine complementary knowledge, push further the material maturation, and exploit epitaxial combinations of the different material classes in order to unveil new properties and produce new functionalities.

The project includes following three working groups (WGs): WG1 Fundamental research – New Materials; WG2 Applications-oriented material developments and WG3 Industry-oriented materials development and technological transfers. Based on this organization, the OPERA COST Action will foster interdisciplinary collaborative research activities allowing maintaining European epitaxy at the topmost worldwide level of research and innovation.

Read more about OPERA: [MoU](#)
[OPERA-COST webpage](#)

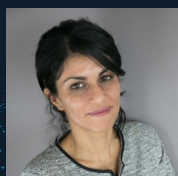
Important contacts



Dr. Noelle GOGNEAU
 ACTION Chair
 +33 170270549
noelle.gogneau@c2n.upsaclay.fr



Dr. Tamara POTLOG
 ACTION Vice-Chair
 +37 322-244-821
tpotlog@gmail.com



Dr. Fatima BOUCHAMA
 Science officer
 +32 25333832
fatima.bouchama@cost.eu



Ms Milena STOYANOVA
 Administrative officer
 +32 25333849
milena.stoyanova@cost.eu

EUROPEAN NETWORK FOR INNOVATIVE AND ADVANCED EPITAXY

OPERA COST Action “European Network for Innovative and Advanced Epitaxy” CA20116 Short-Term Scientific Missions (STSMs)

First call for the short-term scientific missions (STSM) funded by OPERA is open

A short-Term Scientific Mission (STSM) consists in a visit of a host organization by a Researcher or Innovator to carry out a specific scientific task for a period of time between 5 working days and 60 calendar days. The OPERA-STSM program funds, on competitive basis, grants that provide a contribution to cover the expenses related to STSMs with up to 2500 Euros. The participation of Young Researchers and Innovators – defined as scientists under the age of 40 – and PhD students is fostered through the evaluation procedure. More information can be found: <https://nextcloud.c2n.u-psud.fr/index.php/s/sFjG4Wcs4xKztzZ>

STSM second call will be opened on May 10. To apply to this second call, please email your STSM application (to: opera-coregroup@c2n.upsaclay.fr) and the Host institution welcome letter by May 31, indicating in the subject of your email: STSM Application. To prepare your application, you must read the files and use the templates provided below:

STSM program description: <https://nextcloud.c2n.u-psud.fr/index.php/s/sFjG4Wcs4xKztzZ>

Application template: <https://nextcloud.c2n.u-psud.fr/index.php/s/pzAxjQdA5yJQ75i>

Host institution welcome letter template:

<https://nextcloud.c2n.u-psud.fr/index.php/s/dtjqQi5Rso6gQsn>

STSM report template (to be filled after the STSM): <https://nextcloud.c2n.u-psud.fr/index.php/s/7Ddbt6DARRgDxcY>

OPERA • COST ACTION CA20116

EUROPEAN NETWORK FOR INNOVATIVE AND ADVANCED EPITAXY



The 2022 E-MRS Fall Meeting

The 2022 E-MRS Fall Meeting and Exhibit will be held in Warsaw University of Technology, from September 19 to 21 (exhibition) and September 19 to 22 (technical sessions).

The conference will consist of 20 parallel symposia with invited speakers, oral and poster presentations and a plenary session to provide an international forum for discussing recent advances in the field of materials science. The conference will be augmented by an exhibition of products and services of interest to the conference participants.

This will be an exciting event which should not be missed! We look forward to welcoming you to Warsaw and your active contribution and participation in the conference.

<https://www.european-mrs.com/meetings/2022-fall-meeting>

The COST action OPERA may financially support the participation to the conference, especially for young researchers originating from target countries. For more information about funding requests, please visit: <https://www.cost.eu/actions/CA20116/>

Please note the deadline for abstract submission is June 6, 2022. This is going to be an exciting event which should not be missed! We look forward to your active contribution and participation in the conference.

OPERA • COST ACTION CA20116

EUROPEAN NETWORK FOR INNOVATIVE AND ADVANCED EPITAXY

Training school "Modern directions in Epitaxy"

The training school will include the areas of **fundamental** and **applied** epitaxy research, including advances in the technique, synthesis of new materials, discovery of new physical properties, formation of novel heterostructures, and the development of innovative devices.

Apply for the school by sending the application form ([link to form](#)) no later than 1/5-2022, 12:00 CET to: opera-registration@clermont-auvergne-inp.fr
Decision will be communicated to applicants by email no later than 20/5.

Additional questions, please contact the training school organizers: Felix Trier – fetri@dtu.dk, Thomas Sand Jespersen – tsaje@dtu.dk, Nini Pryds – nipr@dtu.dk



OPERA COST ACTION

ABSTRACT
The training school will include the areas of fundamental and applied epitaxy research, including advances in the techniques, synthesis of new materials, discovery of new physical properties, formation of novel heterostructures, and the development of innovative devices.

PRACTICAL DETAILS
40 applicants will be accepted to participate in-person at the training school. 12 participants will be selected for reimbursement by the COST Action. The school will be held as a hybrid event with online access to the lectures. Admittance to the training school is **free** and lunch will be provided on-site. Apply for the school by sending a form no later than **1/5-2022, 12:00 CET** to: opera-registration@clermont-auvergne-inp.fr. Decision will be communicated to applicants by email no later than 20/5. Additional information found at: <https://www.fox.energy.dtu.dk/opera>

ORGANIZERS
Nini Pryds (contact: nipr@dtu.dk), Thomas S. Jespersen, Felix Trier, Noelle Gogneau, Yamina André

CONFIRMED SPEAKERS
Noelle Gogneau, Uni. Paris-Saclay (FR)
Bharat Jalan, Uni. Minnesota (US)
Fabio Miletto, CNR (IT)
Chang-Beom Eom, Uni. Wisconsin (US)
Jean Decobert, III-V lab (FR)
Yamina André, Institut Pascal, INP, UCA (FR)
Jesper Nygård, Uni. Copenhagen (DK)
Tim Booth, Tech. Uni. Denmark (DK)
Milan Radovic, PSI (CH)
Luise Theil Kuhn, Tech. Uni. Denmark (DK)
Beena Kalisky, Bar-Ilan Uni. (IL)
Thomas Sand-Jespersen, Tech. Uni. Denmark (DK)
Capres Inc. (DK)
Peter Kroghstrup, Microsoft (DK)
Felix Trier, Tech. Uni. Denmark (DK)

cost
EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY

**Modern directions
in Epitaxy**

**21-24
JUNE
2022**

Technical University of Denmark
Lyngby, Denmark

EUROPEAN NETWORK FOR INNOVATIVE AND ADVANCED EPITAXY

▪ **NANOSUM: International summer school on Nanosciences and Nanotechnologies**

This School will offer face-to-face courses on the state-of-the-art (Week 1) and keynote seminars (Week 2) from actors of the development of Nanosciences and Nanotechnologies.

Dates: 13 – 24 June 2022

Venue: Carry-le-Rouet, South of France

<https://nanosum.org/>

▪ **SUCCESS-2022 School on UV and X-ray Spectroscopies of Correlated Electron Systems**

This School will introduce the recent experimental developments in ultra-violet and X-ray spectroscopies and their theoretical description, from their basic unifying principles to their applications in the study of correlated electron systems.

Application deadline: 30 June 2022

Dates: 29 August - 09 September 2022

Venue: Les Houches

<https://success-2022.sciencesconf.org/>

▪ **SUCCESS-2022 School on UV and X-ray Spectroscopies of Correlated Electron Systems**

The symposium, co-organized with the EU COST action CA20116 OPERA takes an interdisciplinary and cross-community approach to key problems in epitaxy, including breakthroughs in challenging materials systems, new experimental and theoretical methods for the maturation of epitaxial materials, and novel functionalities for next-generation devices.

Dates: 19-22 September 2022

<https://www.european-mrs.com/innovative-and-advanced-epitaxy-emrs>

EUROPEAN NETWORK FOR INNOVATIVE AND ADVANCED EPITAXY

- Polish Conference on Crystal Growth (PCCG), Gdansk, Poland: June 19-24
https://event.mostwiedzy.pl/event/2/?utm_source=phplist272&utm_medium=email&utm_content=HTML&utm_campaign=International+event++Polish+Conference+on+Crystal+Growth+2022
- International Conference on Molecular Beam Epitaxy (ICMBE), Sheffield, UK: September 04-09
<https://icmbe2020.cinvestav.mx/Portals/icmbe2020/ShortProgram-21ICMBE.pdf>
- DPG Spring Meeting, Condensed Matter Section, Regensburg: September 04-09 (postponed), Deadline: June 1
<https://regensburg22.dpg-tagungen.de/>
- EMRS Fall Meeting 2022, Warsaw, Poland: September 19-22, Deadline: June 6
<https://www.european-mrs.com/meetings/2022-fall-meeting>
- North American MBE Conference (NAMBE), Rehoboth Beach, DE, USA: September 18-21 <https://nambe2022.avs.org/>

EUROPEAN NETWORK FOR INNOVATIVE AND ADVANCED EPITAXY

- International Workshop on Gallium Oxide and Related Materials (IWGO), Nagano, Japan, October 23-27.
<https://iwgo2022.org/>
- MRS Fall Meeting, Boston, MA, USA: November 27 – December 2
<https://www.mrs.org/meetings-events/fall-meetings-exhibits/2022-mrs-fall-meeting-exhibit>
- International Material conference 2022, Lille, France.
October 24-28, Deadline: 09 May 2022
<https://materiaux2022.org>
- Nanomaterials for Energy and Environment International Conference and Exhibition: NanoMatEn 2022: 15-17 June 2022, Paris-France
<https://setcor.org/conferences/nanomaten-2022>
- The 12th edition of Graphene Conference series, the largest European Event in Graphene and 2D Materials, will be organized in-person in Aachen (Germany): July 05-08, 2022. <https://www.grapheneconf.com/2022/index.php>
- Graphene Week
<https://graphene-flagship.eu/events/graphene-week-2022/>

EUROPEAN NETWORK FOR INNOVATIVE AND ADVANCED EPITAXY

- **Growth and properties of III-N quantum structures for fast electronic at the Slovak Academy of Sciences.**
Contact person: Dr. Jan Kuzmik
- **Deposition of functional oxides by spatial atomic layer deposition (SALD) at LMGP, Grenoble-France.**
Contact person: David Muñoz-Rojas
Application deadline: 31 July, 2022
- **Advanced DFT modeling of surfaces and interfaces for the monolithic integration of III-V semiconductors on Si at INSA Rennes, France.**
Application deadline: 20 June, 2022
- **Creating the building blocks for future atomic-scale electronics at Norwegian University of Science and Technology.**
Application deadline: 15 May, 2022
- Several open positions at Paul Drude Institut. Please refer to the website for all the available jobs and respective deadlines.

EUROPEAN NETWORK FOR INNOVATIVE AND ADVANCED EPITAXY

POST-DOC POSITIONS

- Open post-doc positions at Institute of Physics in Zagreb, Croatia.
Ultrafast spectroscopy and photochemical identification.
Application deadline: 03 May, 2022.
- Micro-integrated terahertz quantum-cascade lasers for high-resolution spectroscopy (PQCL) at Paul-Drude Institut, Berlin, Germany.
Contact person: Dr. Lutz Schrottke
- A permanent position in semiconductor optoelectronics/photronics at CEA-IRIG, Grenoble.
Application deadline: 10 May, 2022.
- Functional Oxide surfaces and interfaces for low power electronics H/F.
Application deadline: 16 May, 2022.
Contact person: Nicholas BARRETT
- Research engineer in molecular beam epitaxy for optronic applications in **Université Paris-Saclay.**

OPERA • COST ACTION CA20116

EUROPEAN NETWORK FOR INNOVATIVE AND ADVANCED EPITAXY

Join us

To be registered on the OPERA COST Mailing list

https://listes.universite-paris-saclay.fr/c2n/subscribe/cost-opera?previous_action=info Note that it is a two-step process. After your registration to the list, you must confirm it with the received email.

Useful links

- [COST Members](#)
- [Near Neighbour Country \(NNC\) & International Partner Countries \(IPC\)](#)
- [Grant Awarding - User guide](#)