

46th Risø International Symposium on Materials Science: Characterization of Evolving Microstructures in Metals

7-11 September 2026

This Symposium will focus on in-depth understanding of the microstructural evolution in metallic samples and components during manufacturing, processing, and while components are in-use in practical applications. Recent years have brought an unprecedented development of 2D, 3D and 4D characterization techniques operating alone or in combination on multiple length scales. These have led to new insights into details of the microstructure and its evolution when samples or components are exposed to external stimuli. The relevance of such microstructural information, however, depends on its contribution to advancing a fundamental understanding of the underlying mechanisms as well as its contribution to validation and further development of physical based simulation tools. A goal of the Symposium is to discuss these advancements.

While additive manufacturing of metals has become popular in recent years, the practical importance of more conventional manufacturing processes is huge and so is the potential for their further optimization. The Symposium will thus cover additive as well as conventional manufacturing by e.g. rolling, extrusion, or annealing. Also, presentations dealing with how knowledge from conventional manufacturing can be transferred to the additive area are welcomed. The whole range of metals and alloys from conventional single-phase metals to advanced microstructurally designed alloys are in focus. The microstructural features to be considered are not limited to classic ones, such as dislocations, cells, subgrains and grains, particles, but also include local strains, residual stresses, larger scale microstructural variations, and more. Contributions based on experimental as well as theoretical work are embraced. As examples, presentations may cover:

- Microstructural evolution during manufacturing (conventional or additive), thermo-mechanical processing, annealing, or during in-service operation
- Effects of microstructural variability on the subsequent evolution in microstructure
- Causal relations between evolution in microstructure and properties
- Potentials of novel experimental characterization techniques
- Advancements in analytical and numerical models and their linkage to experimental findings
- Design of alloys and processes for controlled microstructure evolution
- Challenges related to microstructure optimization for practical applications

The format of the Symposium will follow its traditional scheme, with all presentations being given in the Auditorium at the DTU Risø Campus near Roskilde. There will be no parallel sessions, and the participants will have ample time for in-depth discussions both in plenum and during coffee breaks, lunches and dinners. All presentations must be accompanied by a paper published in open access format by IOP, and in a printed Symposium Proceedings book, which will be provided to all participants upon arrival at the Symposium.

VELUX FONDEN



This symposium is supported by Villum FONDEN
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Keynote speakers

- H. Bhadeshia (Queen Mary University of London, UK)
- B. Britton (University of British Columbia, Canada)
- F. Hild (Laboratory of Mechanics Paris-Saclay, France)
- R. Holmestad (NTNU, Norway)
- C. Körner (University of Erlangen-Nurember, Germany)
- S. P. Narra (Carnegie Mellon University, USA)
- X. Sauvage (University of Rouen Normandie, France)
- N. Tsuji (Kyoto University, Japan)
- P. Withers (University of Manchester, UK)
- Y. Zhang (DTU, Denmark)

Invited speakers

- H. Becker (University of Magdeburg, Germany)
- M. J. Duarte (Max Planck Institute, Germany)
- H. Fang (ESRF - The European Synchrotron, France)
- N. A. Henningsson (DTU, Denmark)
- F. Lin (Suzhou Laboratory, China)
- S. Van Petegem (Paul Scherrer Institute PSI, Switzerland)
- O. Renk (University of Leoben, Austria)
- A. Shahani (University of Michigan, USA)

International advisory committee

- M. Barnett (Deakin University, Australia)
- X. Huang (Chongqing University, China)
- L. Kestens (Ghent University, Belgium)
- K. Marthinsen (NTNU, Norway)
- G. S. Rohrer (Carnegie Mellon University, USA)
- A. Taniyama (The Japan Institute of Metals and Materials, Japan)



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Important dates

| | |
|-------------------|-----------------------|
| 15 February 2026: | Abstract submission |
| 1 May 2026: | Paper submission |
| 1 July 2026: | Registration deadline |

Abstracts of maximum 1 page should be submitted before 15 February 2026.

Please send abstract to RisoeSymp@construct.dtu.dk

Proceedings

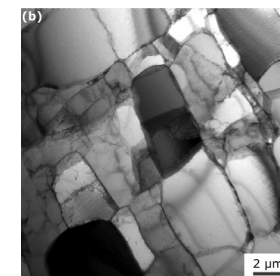
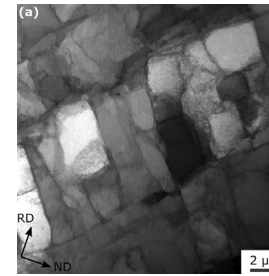
All the papers, including keynote, invited and contributed papers will be published in the open access journal "IOP Conference Series: Materials Science and Engineering", as well as being printed as a symposium proceedings to be distributed to the participants at the symposium.

Further information will be announced in due time on the symposium website:
www.conferencemanager.dk/46thrisoesymposium2026

Registration

The registration fee is EUR 800 covering the Symposium proceedings, lunch and refreshments all days, two conference dinners, and social arrangements.

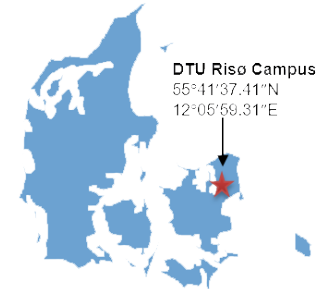
The registration fee for bona fide students is EUR 400.



Venue

The symposium will take place at the Niels Bohr Auditorium (building 112) at DTU Risø Campus.

DTU Risø Campus is situated by Roskilde Fjord, 7 km north of Roskilde. In the center of Roskilde, you will find many cultural highlights e.g. Roskilde Cathedral which was built during the 12th and 13th centuries, and the Viking Ship Museum exhibiting viking ships found in the local fjord.



Accommodation

Hotel reservations must be made directly with the hotel. The following hotels in Roskilde (near DTU Risø Campus) and Copenhagen (close to the central railway station) are recommended:

Comwell Roskilde

Vestre Kirkevej 12, DK-4000 Roskilde
Phone: +45 4632 3131;
hotel.roskilde@comwell.com

Scandic Roskilde

Ved Ringen 2, DK-4000 Roskilde
Phone: +45 4632 4632;
roskildepark@scandichotels.com

Four Points Flex by Sheraton Roskilde

Algade 13, DK-4000 Roskilde
Phone: +45 2461 4020;
roskilde@coreh.dk

Hotel NH Copenhagen Grand Joanne

Vesterbrogade 9, DK-1620
Copenhagen K
Phone: +45 3244 3059;
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