

Press Release

6th November 2023

Dierk Raabe receives NIMS Award 2023

Raabe honoured for his outstanding achievements on sustainable metallurgy and advanced alloy design by Japanese National Institute for Materials Science

Prof. Dierk Raabe, director at the Max-Planck-Institut für Eisenforschung (MPIE), received the NIMS Award 2023 by the Japanese National Institute for Materials Science (NIMS). The award recognizes his outstanding achievements pioneering research on the sustainable and microstructure-based design of advanced metallic alloys. The award ceremony and honorary lecture took place on 6th November during the NIMS Award Symposium 2023 in Tsukuba, Japan.

“I am delighted and deeply honoured to receive this recognition from the international community for my dedication to sustainable metallurgy. This award, coupled with the engaging discussions at the NIMS conference, reaffirm the direction of my research. Fundamental research plays a pivotal role in achieving our climate objectives and making a tangible impact on climate change and the required global industrial transformation”, states Raabe. At MPIE, Raabe and his colleagues are committed to advancing the frontiers of sustainable materials science and digitalization. Their work encompasses various domains, such as reducing carbon emissions by employing hydrogen and ammonia in steel production, developing more efficient catalysts for green hydrogen production, developing alloys made from scrap that tolerate higher impurity contents, balancing electrons and hydrogen as reductants in plasma metallurgy, designing rare-earth-free and recycled magnets for electrification, and increasing the recycling rates of complex alloys to further the goal of a circular economy. Their research involves cutting-edge experiments and simulations down to the electronic structure scale and integrates artificial intelligence techniques.

The NIMS Award honours exceptional researchers who have made ground-breaking contributions to the field of materials science and technology. Since 2007, nominees are selected annually by world-leading scientists and chosen by the NIMS award committee. The laureates are selected from the four major research topics of NIMS in turn every year: materials for environment and energy, functional materials, structural materials and basic materials science. This year’s award acknowledged outstanding achievements in the realm of structural materials through fundamental research.



Prof. Dierk Raabe, director at the Max-Planck-Institut für Eisenforschung in Düsseldorf (Germany), received the NIMS Award 2023 by the Japanese National Institute for Materials Science (NIMS). Copyright: ©Thor Nielsen, NTNU

The international team of the Max-Planck-Institut für Eisenforschung (MPIE) pioneers advanced basic materials research in key areas like sustainability, mobility, energy, digitalization, infrastructure and medicine. The focus lies on nanostructured metallic materials and semiconductors. The institute's approach encompasses every step of the process: from sustainable synthesis and processing to characterization down to atomic and electronic scales and property analysis. This enables the MPIE team to develop new, tailor-made structural and functional materials that excel even in the most challenging real-world operating environments.

Stay up to date and follow us on [LinkedIn](#), [YouTube](#) and [X](#).

Contact:

Yasmin Ahmed Salem, M.A.
Press and Public Relations Officer
E-Mail: y.ahmedsalem@mpie.de
Tel.: +49 (0) 211 6792 722
www.mpie.de

