



Press Release

30 September 2024

Distinguished Career Award goes to Jörg Neugebauer

Max Planck director honoured for his groundbreaking contributions to materials modelling

Professor Jörg Neugebauer, director at the Max Planck Institute for Sustainable Materials (MPI-SusMat), has been awarded the ISMM Distinguished Career Achievement Award in Materials Modelling. This prize, presented by the International Society for Materials Modelling (ISMM), recognizes his lifelong contributions to advancing the field of materials simulation. Neugebauer, who has headed the Department of Computational Materials Design at MPI-SusMat for nearly 20 years, received the award during the Multiscale Materials Modelling conference in Prague on September 26, 2024.

"I am deeply honoured to receive this prestigious award, which reflects not only my work but also the dedicated efforts of my team over the years. It's a recognition of how far materials modelling has come and how essential it is to the future of materials science," says Neugebauer. The award jury highlighted Neugebauer's pioneering research in first-principles-based multiscale materials design, which has enabled highly accurate and efficient predictions of the properties and behaviour of real-world materials. His work, particularly in parameter-free thermodynamics and kinetics, has advanced the understanding of the structure-property relationships of metals and alloys. At MPI-SusMat, Neugebauer's department spans a wide range of activities, from designing materials for structural and energy applications to interpreting microscopy data with machine learning and large language models, to developing pyiron, an integrated development environment for computational materials science.



Professor Jörg Neugebauer (in the middle) receiving the ISMM Distinguished Career Achievement Award in Materials Modelling. Copyright: 11th International Conference on Multiscale Materials Modelling



Professor Jörg Neugebauer giving the Award Lecture during the 11th International Conference on Multiscale Materials Modeling. Copyright: 11th International Conference on Multiscale Materials Modelling

Materials science is facing major challenges: The steel industry alone contributes eight percent of global carbon dioxide emissions. Each year, e-waste, equivalent to 350 mega cruise ships, is discarded or incinerated rather than recycled, despite containing valuable metals. At the Max Planck Institute for Sustainable Materials (MPI SusMat), we are exploring climate-neutral, resource-conserving approaches to produce, utilize, and recycle essential materials for modern societies. We seek to produce metals using hydrogen instead of fossil fuels, extend material lifespans, enhance recyclability, and minimize waste. When developing materials that fulfil these requirements, we are increasingly relying on artificial intelligence to make the process significantly more efficient. The institute conducted its research under the name Max-Planck-Institut für Eisenforschung GmbH until 2024.

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
<https://www.mpi-susmat.de>

