

State Secretary of North-Rhine Westphalia Dirk Günnewig visits Max-Planck-Institut für Eisenforschung

On Monday, 28 March 2022, Dr. Dirk Günnewig, State Secretary in the Ministry of Culture and Science of the State of North-Rhine Westphalia, visited the [Max-Planck-Institut für Eisenforschung \(MPIE\)](#).

"North-Rhine Westphalia is the most important European location for the metal industry and at the same time home to fundamental and trendsetting iron research. It is impressive to see how outstanding scientists from more than 35 nations are working together here at the institute to conduct research on highly relevant topics for society such as the reduction of CO₂ in metal production," said State Secretary Dr. Günnewig during his visit to the Max Planck laboratories.

In addition to its [four research departments](#) and numerous [external and independent research groups](#), the MPIE also has a [doctoral school](#) that has been dedicated entirely to research on [sustainable metallurgy](#) since January 2022. Here, the MPIE collaborates with the Max-Planck-Institut für Kohlenforschung in Mülheim and the universities of Bochum and Duisburg-Essen. "We can only develop new materials and processing methods that meet the highest technological requirements on the one hand, are sustainable on the other, and also incorporate rapidly developing industries such as electromobility if scientists from different disciplines and educational backgrounds work together. To do this, we also need the support of politics in the form of appropriate funding," says Prof. Dierk Raabe, managing director of the MPIE.

The visit focused on current research issues as well as the strategic orientation of the institute. The laboratories for iron reduction with [hydrogen](#) to produce green steel and a laboratory for [3D printing of metals](#) were visited. State Secretary Günnewig is also a member of the [MPIE's supervisory board](#), an important body with representatives from science, science management, industry and the public that advises the institute.



Dr. Isnaldi Souza (right), group leader at the Max-Planck-Institut für Eisenforschung, explains to State Secretary Dr. Dirk Günnewig how iron ores can be reduced to iron in an environmentally friendly way using hydrogen plasma. © Max-Planck-Institut für Eisenforschung GmbH



Dr. Rajaprakash Ramachandramoorthy (left), group leader at MPIE, explains to State Secretary Dr. Dirk Günnewig (center) and Hartmut Pausewang, head of department at the Ministry of Culture and Science North-Rhine Westphalia, how he and his group are developing alloys for 3D printing of metals. © Max-Planck-Institut für Eisenforschung GmbH

The international team of the Max-Planck-Institut für Eisenforschung conducts advanced basic materials research for the fields of mobility, energy, infrastructure, medicine and digitalisation. The focus lies on nanostructured metallic materials as well as semiconductors, which are analysed down to their atomic and electronic scales. This enables the MPIE team to develop new, tailor-made structural and functional materials embracing their synthesis and processing, characterization and properties, as well as their response in engineering components exposed to real operating environments.

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