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International Workshop on Sustainable Metallurgy of Green Steel – GreenSteel2022 (online)

Program (Düsseldorf time)

12th September 2022 (Monday), start at 10:00 (CET)

10:00 – 10:10 (CET)	Introduction & housekeeping
10:10 – 10:50	Open questions and research directions in green steel making <i>Prof. Dierk Raabe, Max-Planck-Institut für Eisenforschung, Germany</i>
10:50 – 11:30	Hydrogen-based steel production routes - A comparison of the technological principles <i>Prof. Johannes Schenk, Montanuniversität Leoben, Austria</i>
11:30 – 12:10	H₂-based and biomass-based ironmaking: Inputs from modelling <i>Prof. Fabrice Patisson, Institut Jean Lamour, Labex Damas, Université de Lorraine, France</i>
12:10 – 13:10	Lunch break
13:10 – 13:50	Microstructure evolution during hydrogen-based direct reduction of iron oxides <i>Dr.-Ing. Yan Ma, Max-Planck-Institut für Eisenforschung, Germany</i>
13:50 – 14:30	Chemo-mechanical phase-field modeling of iron oxide reduction with hydrogen <i>Dr. rer. nat. Yang Bai, Max-Planck-Institut für Eisenforschung, Germany</i>
14:30 – 15:10	Understanding the hydrogen reduction of iron oxides at atomistic scale <i>Prof. Kejiang Li, University of Science and Technology Beijing, China</i>

13th September 2022 (Tuesday), start at 10:40 (CET)

10:00 – 10:40 Canceled	By-products and Co-products for improved recycling <i>Prof. Brian Monaghan, University of Wollongong, Australia</i>
10:40 – 11:20 (CET)	On-going research activities at the University of Oulu for fossil-free steelmaking <i>Prof. Timo Fabritius, University of Oulu, Finland</i>
11:20 – 12:00	Making sustainable steel through hydrogen plasma reduction of iron ores <i>Dr. Isnaldi R. Souza Filho, Max-Planck-Institut für Eisenforschung, Germany</i>
12:00 – 13:00	Lunch break
13:00 – 13:40	Iron powder as a dense carrier for future green energy <i>Prof. Philip de Goey, Eindhoven University of Technology, The Netherlands</i>
13:40 – 14:20	Microstructural evolution of iron powder during combustion and hydrogen-based direct reduction <i>Dr.-Ing. Laurine Choisez, Max-Planck-Institut für Eisenforschung, Germany</i>
14:20 – 15:00	Discussion & Wrap-up