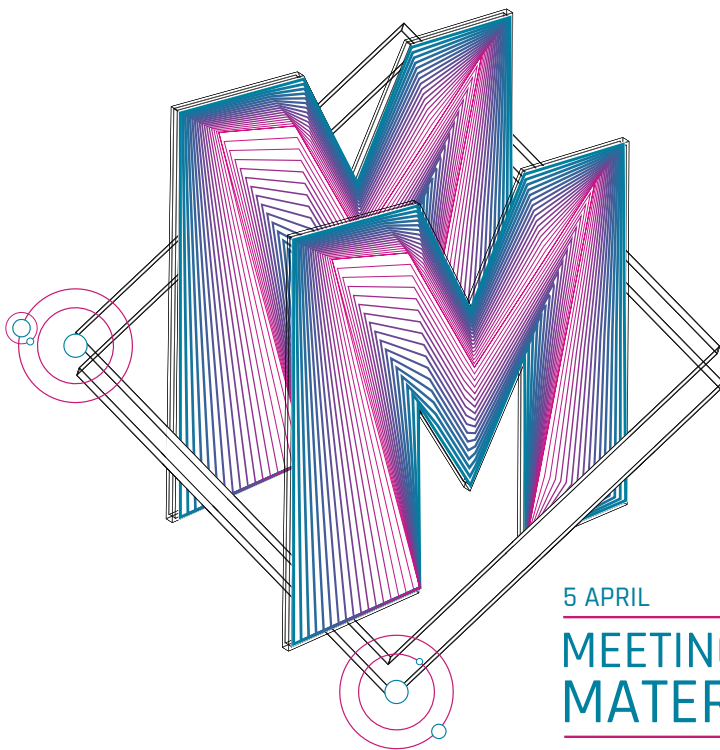


Tue 5 April

PROGRAM 2022



5 APRIL

MEETING 2022
MATERIALS

ORGANISING PARTIES



NH LEEUWENHORST

Noordwijkerhout, The Netherlands

8 am - 5 pm

08.00 **Doors open**
Coffee and registration in Atrium Lounge

Opening and introduction Rotonde

09.00 **Rob Boom, Senior Scientific Advisor M2i and Chairman of the day**
Opening

09.05 **Marko Bosman, Director Programmes M2i & Erik Vegter, Scientific Director M2i**
Introduction Meeting Materials 2022

09.20 **Ad van Wijk, TUD**
KEYNOTE Why hydrogen as zero carbon energy carrier, feedstock and reducing agent?

09.50 **Paul Behrens, LU**
KEYNOTE What the latest climate science tells us and implications for accelerating the material transition

Elevator pitches Rotonde

10.20 **SMEs 90-seconds pitch presentations**
Rotonde

10.50 **Coffee break & market fair exhibition**
Atrium

Theme sessions

	Theme 1 Rotonde Engineering materials <small>(incl. additive manufacturing and steel manufacturing)</small>	Theme 2 Boston 9 Sustainability: Circularity and Energy Transition	Theme 3 Boston 11 Artificial intelligence in materials modeling and manufacturing	Theme 4 Boston 13 Advanced materials characterisation / Smart*Light	Theme 5 Boston 15 4TU.HTM Metamaterials
SESSION CHAIR	Franz Roters, DENS, MPIE	Erik Vegter, M2i	Ton van den Boogaard, UT	Maria Santofimia, TUD	Arjan Mol, TUD / 4TU.HTM
11.15	Rutger Slooter, TUD The precipitate interface	Jessie Bradley, TUD Modeling metal supply chain resilience. A case study of nickel and tin	Menna van der Winden, Tata Steel Data Driven Steel, the journey of Tata Steel in IJmuiden	Jaris Dik, TUD Smart*light: A table-top X-ray source and its potential applications	Varvara Kouznetsova, TU/e Metamaterials: emergent technology for a new design paradigm
11.40	Jan Steven van Dokkum, TUD Static Unified Inelastic Model: dislocation-mediated deformation pre-, at- and post-yield	Aleksander Andreski, Saxion Automatic Sorting of E-Waste	Martin Diehl, KU Leuven A machine-learning model to design optimal dual phase steels	Katia Pappas, Reactor Institute Delft Looking inside Materials with Neutrons	Corentin Coulais, UvA Dissipative metamaterials
12.05		Hans Hage, Tata Steel EIT-RM's ReclaMet, Scale-up project for enhancing circularity, Academic input for the development of Hisarna ironmaking	Bojana Rosic, UT Self-optimized deep neural network for manufacturing process	Henk Schut, Reactor Institute Delft Materials Research using Positron Annihilation Techniques	Maria Loi, RUG Colloidal quantum dots based metamaterials for optoelectronics

12.30 | Lunch break & market fair exhibition
Atrium

Theme sessions

	Theme 6 Rotonde Additive manufacturing	Theme 7 Boston 9 Sustainability: Circularity and Energy Transition	Theme 8 Boston 11 Artificial intelligence in materials modeling and manufacturing	Theme 9 Boston 13 Advanced materials characterisation	Theme 10 Boston 15 4TU.HTM Metamaterials
SESSION CHAIR	Gert-willem Römer, UT	Erik Vegter, M2i	Ton van den Boogaard, UT	Maria Santofimia, TUD	Arjan Mol, TUD / 4TU.HTM
14.00	Fred van Keulen, TUD Topology Optimization for Additive Manufacturing	René Kleijn, LU Circularity: a critical ingredient for the energy transition	Jos Havinga, UT Smart manufacturing lines: learning from simulation models and real-time data	Stefan Zaefferer, MPIE Latest insights into additive manufactured materials by a new "Large volume 3D EBSD" (ELAVO 3D) system	Alejandro M. Aragón, TUD Advanced computational tools for the analysis and design of metamaterials
14.20	Remco Rook, RAMLAB Bridging digital workflow and digital production for WAAM	Sebastiaan Peelman, Umicore Sustainable recycling of complex materials	Michael Dogge, Bosch Towards digitalization and hybrid modeling	James Small, Tata Steel When the dust settles: using particle mineralogy to pinpoint steel making contributions in dust deposits	Ondrej Rokos, TU/e Design and modeling of active mechanical metamaterials
14.40	Joris Remmers, TU/e Multi-scale analysis of Additive Manufacturing processes: from raw material to printed product	Poulumi Dey, TUD Computation- guided materials designing for sustainable & renewable energy applications	Dimitrios Zarouchas, TUD From conventional aero-structures of today to cyber-physical assets of tomorrow	Arno Kentgens, RU NMR - Solid-state NMR Studies of Materials for Energy Conversion and Storage	Jieun Yang, TU/e Acoustic metamaterials and their potential in the built environment
15.00	Marc de Smit, NLR Development of Magnesium Laser Powder Bed Fusion to manufacture light-weight components for Aerospace applications	Teun Verhagen, LU The energy and material related impacts of the transition towards low-carbon heating: A case study of the Netherlands	Theron Guo, TU/e A reduced basis method for accelerating parameterized non-linear microstructures		Mohammad Mirzaali, TUD Designer materials with tunable properties

15.20 | Coffee break & market fair exhibition
Atrium

Plenary final session Rotonde

15.50 | Albert Polman, NWO-Institute - Duurzame MaterialenNL
KEYNOTE Sustainable materials solve big societal problems

16.20 | Grade2XL Design Contest
Award Ceremony

16.35 | Marko Bosman, M2i
Closure

16.45 | Drinks & closure
Atrium

Map

