

Joint Workshop

Surfaces, Interfaces & Coatings

online series of lectures (via Teams)

22 Oct, 29 Oct, 5 Nov 2020

15:00-17:00 hours

4TU.High-Tech Materials
&
Materials Innovation Institute (M2i)

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Every material, also if applied for its bulk properties, has a surface or at least an interface to another material, where numerous dynamic processes can take place, down to the smallest length scales. These processes can form a threat for the material (like corrosion), but can also be beneficial or even essential for its functionality (like heat exchange). Coatings, introducing new surfaces and interfaces, can form an effective means to improve the functionality and/or life time of materials. Understanding surfaces and interfaces forms an intricate and essential part of materials science in its quest to optimise understanding and application of materials.

Thursday 22 October	
	<p>Introduction & chair Prof.dr.ir. Jilt Sietsma (scientific director 4TU.HTM) Materials Science and Engineering, 3mE, Delft University of Technology</p>
15.00 - 15.30	<p>Alejandro Aragón (TU Delft) <i>Enriched finite element modelling of interface problems</i></p>
15.30 - 16.00	<p>Matthijn de Rooij (UTwente) <i>Modelling and measuring adhesion and friction in a tribological contact</i></p>
16.00 - 16.30	<p>Amarante Böttger (TU Delft) <i>Modelling of surface segregation for palladium alloys in vacuum and gas environments</i></p>
16.30 - 17.00	<p>Sissi de Beer (UTwente) <i>Modelling polymer brush coatings in contact with gasses for sensor and separation technologies</i></p>
Thursday 29 October	
15.00 - 15.30	<p>Arnoud de Vooy (Tata Steel R&D) <i>Trivalent chromium plating in a high-speed continuous steel strip plating line</i></p>
15.30 - 16.00	<p>Lie Zhao (VDL Weweler BV) <i>Surface development of trailing arms during fully automatic production: challenge and innovation</i></p>
16.00 - 16.30	<p>Ingmar van Hengel (TU Delft) <i>Additively manufactured implants with multifunctional surfaces</i></p>
16.30 - 17.00	<p>Catarina Esteves (TU/e) <i>Design polymer networks for surface functionality: self-healing, anti-fouling and low-friction</i></p>
Thursday 5 November	
15.00 - 15.30	<p>Oded Raz (TU/e) <i>Programmable coatings for photonic integrated circuits</i></p>
15.30 - 16.00	<p>Andriy Kuzmyn (WUR) <i>Visible light-triggered living polymerization for creating antifouling and bioactive surfaces</i></p>
16.00 - 16.30	<p>Monique van der Veen (TU Delft) <i>Metal-organic frameworks: nanoporous surface networks for selective sorption applications</i></p>
16.30 - 17.00	<p>Kees Bastiaansen (TU/e) <i>One-Dimensional Metals; some pro's and con's</i></p>

All information online: <https://www.4tu.nl/htm/en/events/workshop-surfaces-interfaces-coatings/>