Prof. Michael Thomas

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Prof. Michael Thomas is Professor at the TU Braunschweig and Head of the department »Interfacial Chemistry and Adaptive Adhesion« at the Fraunhofer Institute for Surface Engineering and Thin Films IST and Head of the Fraunhofer Center Circular Economy for Mobility CCEM at the Open-Hybrid-Lab-Factory (OHLF). His work focuses on the development of coatings and processes as well as combined process chains for the technologies atmospheric pressure plasma processes and surface chemistry as well as electrochemical processes with a focus on sustainable products and processes in the context of the circular economy. The main topics are new cleaning and repair concepts, the control of adhesion on surfaces, the deposition of functional layers and surfaces with the focus on sustainability. For his work on »plasma in a bag«, a novel technology for the internal coating of closed systems for adherent cell cultivation, together with partners from the Municipal Hospital in Braunschweig and the Helmholtz Center for Infection Research (HZI), he received the Fraunhofer prize »Human-Centered Technology« prize in 2013 and the prize »Selected Landmark in the Land of Ideas« in 2011. Besides functional surfaces for medical technology, his focus is also on the development of new process chains and products based on atmospheric pressure plasma processes for different applications. He develops new functional coatings based on renewable raw materials and the use of bio-based materials for new products as well as processes like low temperature bonding and new microplasma sources, e.g. for additive manufacturing and structured treatment of surfaces.

He is also a member of the »Center for Pharmaceutical Process Engineering – PVZ« and responsible for the cooperation between Fraunhofer IST and PVZ. Together with the Fraunhofer ITEM (Hannover) and Fraunhofer EMB (Lübeck), he is the initiator of the establishment of the High-Performance Center »Medical and Pharmaceutical Technology«, in cooperation with the TU Braunschweig and PVZ. Since 2019 he is the Chairman of the »European Joint Committee/Plasma and Ion Surface Engineering (EJC/PISE)«, an association of the leading experts in plasma surface technology in Europe and is also responsible for the cooperation with the Asian association AEPSE. In addition, since 2020 he is the chairman of the board of the competence network »**INPLAS e.V.**«, an industrial network of plasma technology that is certified by go-cluster. Since 2016 Dr. Thomas is also the representative of Fraunhofer IST at **Plasma Germany** and member of the coordination committee.