



METAL MATRIX NANO-COMPOSITE COATINGS UTILIZATION AS ALTERNATIVE TO HARD CHROMIUM

1st Press Release MOZART Kick-off Meeting

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The main goal of the MOZART project is to develop high quality durable composite coatings as replacement to hard chromium under the principles of Sustainable and Safe by Design (SSbD) concept based on nickel matrix nano-composite electroplating processes. These types of coatings will cover a wide range of applications and sectors, will be free of toxic chemicals, based on abundant raw materials, and their mechanical properties have already been experimentally proven to be comparable or even higher in relation to the hard chromium coatings. In particular, the novel nano-composite coatings will be tested in

demonstrators introduced from companies in the field of manufacturing, automotive and machinery.

Besides the alternative coatings, MOZART will have two more important outcomes: a web-based decision support tool which will support the integration of its technologies and advancement into the industry, facilitating the adoption of the SSbD frameworks; and an AI-based tool for coating properties prediction to establish correlations between electrolyte compositions and coating properties considering computational hydrodynamic models of the plating process and integrating SSbD approaches.

Overall, MOZART project provides scientific, technological, and societal impact aligned with the twin transformation targets of the European Commission: Green and Digital.



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On June 30th, 2021, 15 partners from 8 countries (Italy, Spain, Greece, Belgium, Austria, Turkey, Germany, United Kingdom) attended the Kick-off Meeting (KoM) to discuss the mission and the goals of MOZART by presenting their unique role within the project. The KoM took place remotely and focused on the 8 Work Packages, deliverables, and milestones of MOZART, and on the next actions of each partner for the first months of the project.

The wide scope of the consortium formed by 15 partners includes 2 universities, 2 research institutions/associations, 1 large enterprise, and 10 SMEs, guaranteeing the multidisciplinary approach of the project. The MOZART consortium ended the KoM looking forward for the next steps and for joining forces building on their specific scientific knowhow and expertise for the successful achievement of the project's ambition.



#MOZART

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