

GreenCOAT Project

Green high-performance and low-friction interfaces tailored by the reactivity of novel DLC coatings and ionic liquids

Final press release

36 months of GreenCOAT Project

In July 2020, the GreenCoat project, funded by M-ERA-NET, came to an end. After 36 months of work and cooperation between the members of the consortium, the objectives of the proposal were attained. The Laboratory for Wear, Testing & Materials of Instituto Pedro Nunes (LED&MAT/IPN), the Laboratory for Tribology and Interface Nanotechnology of the University of Ljubljana, (UL-TINT) and the ??? of the Norwegian University of Science and Technology (NTNU) were the Consortium Members. Each one was responsible for a specific main research area: preparation of new diamond-like carbon (DLC) coatings, the interaction between DLC and ionic liquids and the tribocorrosion analysis of the films, respectively.



The results were published in scientific magazines (2) and presented in international conferences (6). Further publications will be submitted (5, planned), in the next months, with the conclusions of the last results analyses. The developed work, based on the interaction between ionic liquids and coatings, was performed close to the recommendations from the International Advisory Board of the project.

All the public achievements are available at <https://greencoatproject.eu/> web page. The significance and importance of the project to the improvements of the lubricants and the coatings industries are shown. The synergy between the new ionic liquids as an additive and the optimized doped-DLC coatings was a big step in the green lubricant development.

The excellent interaction and organization of the Consortium partners were crucial to achieve the best results. The management of the project, in particular the results presentation and discussion as well as the planning for further work, was carried out by the partners through a well-shared network and periodic teleconference meetings, besides the presential quarterly meetings.

As the concern with the environment remains a challenge in the tribological-based industrial sector and, on the other hand, the consortium has contributed to a potential greener solution in this area, the idea of continuing the studies remains open.