



Taiho Kogyo Tribology Research Foundation

Name: Prof. Fábio Emanuel de Sousa Ferreira

Theme: Tribological evaluation of functionalised polymers on diamond-like carbon coatings for novel ecological and sustainable lubrication system

Related Presentation/Publication

Conference Attended

**Wear of Materials Conference 2023**

- **Date:** April 16-20, 2023
- **Location:** Banff, Canada
- **Organizers:** Wear of Materials Inc.

**Tribology International Conference 2023**

- **Date:** April 26-28, 2023
- **Location:** Lisbon, Portugal
- **Organizers:** The Science, Engineering, Technology Conferences Organizers (SETCOR)

**Second Arab Conference on Mechanics and Engineering 2023**

- **Date:** December 10-12, 2023
- **Location:** Biskra, Algeria
- **Organizers:** University of Biskra

Paper Published

- **Title:** Wear resistance by copolymers with controlled structure under boundary lubrication conditions
- **Journal:** *Lubrication Science*
- **Title:** Impact of Temperature Variation on Friction Behaviour of Rare Earth-Doped Diamond-like Carbon Coatings with Ionic Liquid Lubricants
- **Journal:** *Lubricants*
- **Title:** Tribological Behavior of Doped DLC Coatings in the Presence of Ionic Liquid Additive under Different Lubrication Regimes
- **Journal:** *Coatings*

Paper Submitted

- **Title:** Synergistic effects of polymeric additive functionalization and DLC doping for friction and wear reduction
- **Journal:** Submitted to *Carbon*

Paper to be submitted

- **Title:** Tribological performance of silver-doped diamond-like carbon coatings under copolymer additives
- **Journal:** to be decided

Future Plans

- Future plans are focused on overcoming remaining challenges and fully harnessing the potential of these innovative lubrication technologies for industrial applications. These advancements are anticipated to contribute to energy savings and aid in environmental protection. Collaboration between academia, industry, and regulatory bodies will be crucial in driving these research efforts and translating them into practical applications.
- Participation in relevant international conferences and submission of research findings to peer-reviewed journals are continuous goals. These efforts aim to share the project's outcomes with the scientific community and industry professionals, contributing to advancements in tribology and lubrication sciences.