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Tackling Emissions from the Internal Combustion Engine: Advances in Piston/Bore Tribology

Guest Editors:

Dr. Boris Zhmud
Tribonex AB, Knivstagatan 12, 753 23 Uppsala, Sweden

Dr. Eduardo Tomanik
Polytechnic School, Mechanical Engineering, University of São Paulo, Sao Paulo 05508-010, Brazil

Deadline for manuscript submissions:
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Message from the Guest Editors

With over 1 billion ICE-powered cars currently in use in the world, improving the fuel efficiency and curbing emissions of the current fleet is crucial. Moreover, many lessons learnt through ICE tribology optimization work lay a useful knowledge foundation for electrical powertrain optimization. One key lesson is that a complete system approach is required in order to balance multiple aspects of vehicle performance, durability, and economy.

Since a significant part of energy losses in ICEs come from friction, engine tribology has been an important research topic over the past two decades and a significant progress in improving the engine efficiency has been achieved. Improving the piston/bore tribology has been one of the chief contributors to this progress. Significant advances have been made in light-weight piston design, the use of low friction coatings for piston skirts and the ring pack, the use of advanced honing methods and spray-coatings for the cylinder bore, etc.

This Special Issue aims to cover the current advances in the piston/bore tribology with contributions from world-leading experts in the field.

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Editor-in-Chief

Prof. Dr. Homer Rahnejat
School of Engineering, University of Lancahire, Preston PR1 2HE, UK

Message from the Editor-in-Chief

Friction, wear, and lubrication are tribological phenomena that govern the behavior of interacting surfaces in a wide range of machine components. Understanding the physical and chemical nature of these phenomena is critical to achieving long component lifetime and economical operation. Research in the field of tribology is highly interdisciplinary, and encompasses the fields of physics, chemistry, engineering, and mathematical modeling. *Lubricants* invites contributions on new advances in all areas of tribology for publication as peer-reviewed research articles, reviews of current research, letters, and communications. We are committed to providing timely reviews of all articles submitted. Please consider sharing your work with the scientific community through publication in *Lubricants*.

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Lubricants Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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