

Editorial

Welcome to *Lubricants*, a New Open Access Journal for Interdisciplinary Research in the Field of Tribology

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Received: 29 June 2012 / Accepted: 29 June 2012 / Published: 2 July 2012

Welcome to *Lubricants*, a new open access journal for researchers and practitioners working in the field of tribology. The journal will publish peer-reviewed research papers, reviews, letters and communications, as well as papers on research ideas and proposals. The concept of open access is exciting because it allows free access of all publications to anyone, resulting in the widest dissemination possible for the authors publishing in the journal. In addition, publication is rapid, and full use can be made of color figures which are published at no additional cost to the authors. The contents of the journal will nonetheless be archival and articles can therefore have a long-term impact.

Tribology is both a fundamental science and an engineering discipline that is critical to society's needs. The origins of tribology can be traced to prehistoric times, making it one of the most enduring of technical fields that still flourishes today. The ability of tribology to combine fundamental science with solutions to modern engineering needs makes it a highly interdisciplinary field that draws from many areas, including chemistry, physics, mechanics, fluids dynamics and materials science. Tribology is traditionally quoted as the study of interacting surfaces in relative motion, and the resulting physical responses of friction and wear. Lubrication can be considered as the means by which friction and wear can be reduced, and hence is central to efforts in tribology. This new journal has been started to promote the generation and communication of new knowledge and ideas in all areas of tribology, from both fundamental concepts to new technologies that impact the tribological performance of engineered systems.

The nature of interacting surfaces can be studied at levels ranging from the atomic to macro-scale. New experimental techniques, developed within the past several decades, have led to a growing interest in the study of tribological systems. Amongst the most important of these is the development of scanning probe microscopy techniques. Such techniques have led to surface imaging with unparalleled detail. Along with advances in experimental techniques, the improvements in computational capabilities have enabled computer simulations to become a vital component in

tribological investigations and can play an important role in predicting the tribological behavior of new materials systems.

The scope of *Lubricants* is intended to broadly cover the field of tribology, with input from many relevant disciplines. Topics can range from fundamental physics and chemistry studies of surface interactions, to new materials for reducing friction, including coatings, solid lubricants, oils, grease, and anti-wear compounds. Reports on new experimental, theoretical and computational methods are welcome, and an exciting feature of this journal will be the ability to electronically provide supplemental materials such as software and data files. In submitting research results, it is important that sufficient details are provided that, in principle, will enable the results to be reproduced in an efficient manner.

This new journal is intended to be a resource for scientists and engineers working in the field of tribology, and will hopefully be of interest to the broader scientific community and those working in related fields. With the open access format, we are confident that these goals can be reached, and that *Lubricants* will quickly become a premier publication resource for the scientific and technical community. We welcome the submission of high-quality original research, and will strive to provide a high level of service to those who submit their work.

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