



## **Editorial: International cooperation between Brazil and Germany in Materials Science**

Pfleging W\* & Bock E§

*\* Institute for Applied Materials, Karlsruhe Institute of Technology, Germany.*

*§ Laboratory of Bioengineering and Biomaterials, Federal Institute of Sao Paulo, Brazil.*

This editorial begins with extreme joy inaugurating the fourth volume of *The Academic Society Journal* not only for another year of existence, but also for characterizing a project of scientific dissemination being carried out and expanded each year.

A fact that helps us to make evident the expansion of our society is the participation of researchers from countries that are far beyond Mercosur, such as Germany. At the last Conference of Engineering and Applied Sciences at the Three Frontiers MEC3F in 2019, which is held annually in the city of Foz do Iguaçu in Brazil, we attended discussions and forums related to materials and energy. In fact, the opening lecture "Electrode materials for lithium-ion batteries and laser processing" was given by our newest member of the editorial board of TASJ, Dr. Wilhelm Pfleging.

From the topics of Materials and Energy, the idea of developing subtractive and additive processes for the manufacture of batteries for medical equipment arose. With IFSP expertise in implantable devices and KIT in engineering and materials science, a long-term research cooperation in the field of energy storage materials adapted to bio-science was initiated.

The objective is the use advanced electrode architectures and unique laser technologies for the development of more reliable, more durable batteries with significantly improved



performance and longer lifetime. As a result, it is expected that in frame of a concept of sophisticated applications several medical devices – especially those with small footprint - will be able to use this next generation type of lithium-ion batteries.

The potential for cooperation between the two countries, not only technological, but also in the training of people and in scientific dissemination, expands for future conferences and in this journal. We hope that the already consolidated Latin American participation of SLABO, with the constant presence of Itaipu Binacional in the organization of MEC3F with Argentine, Paraguayan and Brazilian researchers, will help to receive an enthusiastic group of German scientists at the upcoming events. May the “three borders” be a symbol of integration between sister nations, always welcoming everyone with open arms!

We believe ideas should always be freely encouraged. We invite you to be part of our history. Our doors are open!



Dr. Wilhelm Pfleging



Dr. Eduardo Bock