



Establishment of Carbon-Cycle-System with Natural Rubber

ESCANBER SYMPOSIUM In the project the collaborative research on NR between the Nagaoka University of Technology and the Hanoi University of Science and Technology was supported. The Symposium held in Hanoi was organized by Prof. Masao Fukuda and Prof. Seichi Kawahara, from the Nagaoka University and Prof. Phan Trung Nghia from the Hanoi University. It provided an exclusive forum for intellectually stimulating and engaging interactions among industry and academia to share recent scientific breakthroughs and achievements in rubber technology.

As a renewable plant resource suitable to reduce consumption of fossil resource and release of carbon dioxide, Natural Rubber receives strong requests for its high-degree application and expansion of applications. In order to establish novel industrial fields, it is necessary to promote the following activities in collaboration with researchers in various fields: that is, development of:

- sophisticated purification and new evaluation technologies of natural rubber,
- nanotechnology-based high-performance rubbers and novel sophisticated polymers,
- technology to produce bio-fuel from rubber waste woods,
- advanced methane-producing treatment technology of rubber industrial waste water.

Especially, in a view point of Natural Rubber as a polymer, the state-of-art results of polymer science are applicable to the industrial fields. In order to approach this complex and challenging field of rubber science and technology related to environmental problems and the future resources of polymers a prestigious five year research project was

initiated by the Japan Science and Technology Agency (JSTA) and the Japan International Cooperation Agency (JICA). The project entitled "Establishment of Carbon- Cycle-System with Natural Rubber " (ESCANBER) was aimed to contribute to restraint of global warming in the collaborative research on NR between the institutions in Japan and Vietnam, especially between the Nagaoka University of Technology and the Hanoi University of Science and Technology. The Nagaoka University of Technology was the first among national universities in Japan to start an international twinning program, and the Hanoi University of Science and Technology is the coun-

terpart of this program, with an office of the Nagaoka University on the campus. The partner Vietnam was elected because the NR production in Vietnam is becoming the 4st place in the world. The country is a world-leading country in NR production. On the other hand, Japan is placed the third position in rubber consumption after the United States and China, and has strong tire industry and technical rubber products manufacturers. Faced to the consequences of the big earthquake followed by a tsunami, which caused serious accidents of a nuclear power plant and brought an energy crisis, the search for high performance rubber products including seismic isola-

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Scientists from the conference ESCANBER visiting rubber plantation near Hanoi.

Bild: U. Giese, DIK



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tion rubber light-weight car tires with less energy consumption becomes a big challenge that elevate the significance of the ESCANBER project. Against this background, the outputs of the projects are estimated to add high value to the NR produced in Vietnam and provide development and production of highly value-added rubber products in Japan.

The ESCANBER Symposium held in Hanoi was organized by Prof. Masao Fukuda and Prof. Seichi Kawahara, from the Nagaoka University and Prof. Phan Trung Nghia from the Hanoi University. It provided an exclusive forum for intellectually stimulating and engaging interactions among industry and academia to share recent scientific breakthroughs and achievements in rubber technology. It makes reasons to state, that this will promote the future development of rubber processing and the scientific goals of the project participants. The symposium aimed to provide recent advances in natural rubber science and technology, polymer synthesis, self-assembling processes and morphologies, and functionalization of nano-soft-materials in order to initiate mutual and collaborative research interest that is essential to develop revolutionarily new science and technology in the decades ahead. Lectures and posters presented important new discoveries in natural rubber science and technology, precision polymer synthesis, polymeric nano-soft-materials, self-assembling and their functionalization fiber spinning and film, bio-technology and food-technology, and environment techniques. A plenary lecture was given by Prof. Dr. Ulrich Giese from the German Rubber Institute (DIK). The editor agreed to publish a selection of the papers presented at ESCANBER in two issues of KGK. The organizers of the Symposium express their gratitude to the editor to publish the peer-reviewed papers and thank the speakers and participants for valuable contributions. ■

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Melvin Mooney Award bestowed

MELVIN MOONEY DISTINGUISHED TECHNOLOGY AWARD

At the Spring Meeting from 24 to 26 April 2012 the ACS Rubber Division in San Antonio (Texas) awarded Prof. Dr. Robert Schuster, a board member in DIK, with the „Melvin Mooney Distinguished Technology Award“. The award has been bestowed since 1983 by the Rubber Division in memory of Melvin Mooney, the inventor of the Mooney viscometer and other test equipment. It awards researchers, who make a significant contribution to science and technology of elastomers with an outstan-



Picture: Schuster

Prof. Robert Schuster was awarded with the Melvin Mooney Award

ding competence. The KGK editors wish Prof. Schuster continued success in his research in the name of elastomers. www.dikautschuk.de