

Press release**Hanse-Wissenschaftskolleg****Dipl.-Sozialwissenschaftlerin Heidi Müller-Henicz**

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<http://idw-online.de/en/news584437>Scientific conferences, Transfer of Science or Research
Chemistry, Electrical engineering, Energy, Materials sciences, Mechanical engineering
transregional, national**Material efficiency instead of energy efficiency in the car of the future**

Cobalt and Gallium or Neodymium and Dysprosium, among others, these valuable and at times rare elements can be found in our cars – even today, but especially in the electric cars of the future. However, where – in which components and material compounds – and in which quantities can they be found? How can they be identified and recovered at the end of the useful life of a car to be redirected into the economic cycle? These are only a few of those questions that experts from all over the globe will be dealing with from June 16th-18th 2014 during the workshop ‘Electro mobility: Assessing the Shift from Energy Efficiency to Material Efficiency in the Automotive Life Cycle’ in Delmenhorst.

“There are still many untapped ecological and economic potentials in this field.”

“Currently, energy efficiency and energy carriers are dominating vehicle development and production, but the industry will have to deal much more intensively with the use of new and sometimes scarce and environmentally problematic materials and life-cycle management in the future”, says workshop-initiator Dr.-Ing. Alexandra Pehlken. She is researcher at the Carl-von-Ossietzky University in Oldenburg and Associate Junior Fellow of the Hanse Wissenschaftskolleg.

In the future, cars are supposed to be running on different powertrain concepts, as for example electric motors, and the objective is to further enhance their security, efficiency and intelligence. In doing so, they will increasingly contain electrical and electronic components as motors, sensors, management systems or batteries, and consequently an increased share of new materials and material combinations. Many of the resources used, are rare and valuable, while their extraction is related with high efforts and environmental impacts. Numerous of those materials belong to the group of Rare Earth Elements, most of them are classified as strategic resources, and they all require a best possible recovery and reuse with regard to a sustainable and economical management.

“There are still many untapped ecological and economic potentials in this field”, says Pehlken. “However, we are often still lacking the necessary information regarding the amount and application of these materials, as well as the technologies that allow for their processing and reuse.” This challenge in particular, lies at the core of the workshop. The programmed topics include: construction, production, use, maintenance, product-life-cycle-management, technology, as well as business, strategic and political options.

Internationally recognised experts from science and industry will be fielding questions and enter into dialogue.

The workshop is supported by the Metropolregion Bremen-Oldenburg im Nordwesten e. V., the Fonds der chemischen Industrie (FCI) and the Universitätsgesellschaft Oldenburg e.V. (UGO). Alexandra Pehlken and Wolfgang Stenzel from the Hanse Wissenschaftskolleg (HWK) enlisted renowned speakers. They are coming from Great Britain, Sweden, Austria, Canada, as well as China, and they provide insights on current research in the field of this globally discussed key issue for the future.

Co-organiser of the workshop, among the speakers, is Prof. Dr. Steven Young from the University of Waterloo (Canada). He is engaged with research related to sustainable materials management, life-cycle-analyses and industrial supply chains, among others.

One of the invited experts is the British geo-scientist for minerals and waste materials, Prof. Dr. Andrew Bloodworth from the British Geological Survey. Just recently, in January 2014, he published an article related to the topic of the workshop in the international science magazine Nature, which received a great deal of attention. His Critical Metals Handbook, from February 2014, has lead to a heated discussion, not only among experts. After being quickly sold out, it is currently being re-issued. Bloodworth is keynote speaker of the event and is also attending the discussion.

Furthermore, Mathias Brucke, clustermanager at the Automotive Northwest e. V., is participating in the workshop. The network bundles interests of the automotive sector in northwest Germany and is cooperation partner of the workshop. "Electro mobility and energy efficiency have many dimensions", says Brucke. "It is not only about fuel efficiency. When we consider that today's cars do already consist of almost 40 per cent electronic components, the importance of the therein contained valuable materials for sustainability becomes evident", he says. "Their responsible use, with the help of the latest technology and, for example, an adequate product-life-cycle-management, will play an important role for the success of the automotive manufacturers in the future", concludes the automotive expert.

Information regarding programme and registration:

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