



Hanse-Wissenschaftskolleg  
Institute for Advanced Study



## Workshop Announcement – Save the date

Electro mobility: assessing the shift from energy efficiency to material efficiency in the automotive life cycle

### Organizers:

Alexandra Pehlken (COAST, Carl von Ossietzky University Oldenburg, Germany)  
Steven B. Young (SEED, University of Waterloo, Canada)  
Wolfgang Stenzel (Hanse-Wissenschaftskolleg, Germany)

**June 16-18, 2014** at the Hanse-Wissenschaftskolleg  
(HWK, Institute for Advanced Study), Delmenhorst, Germany

### **Motivation**

Automobiles have become lightweight, smarter, safer and more electric. Each of these trends has demanded new types and new combinations of materials – materials that have become more complex.

This workshop suggests that in the future the dominant challenge for developers and manufacturers of cars may no longer be issues of energy efficiency and fuels. Instead new questions are growing on the use of new, sometimes scarce and environmentally problematic materials, which challenge the life cycle management of automobiles and materials.

Critical metals have already gained attention as important to the automotive sector, due to increased use of electrical devices like motors, sensors and batteries. Cobalt and gallium, rare earth elements (e.g. neodymium, dysprosium, praseodymium and terbium) and other metals are critical in automobiles—and all classified as strategic raw materials. It is therefore important to manage material destiny at the end of service life, with an aim to recover them for further use. There is a lack of data concerning the amount of critical metals in vehicles and on recycling technologies that will need to keep up with rapid changes in material content of future vehicles.

**Sessions** will focus on:

- Design and manufacturing
- Use and maintenance
- End-of-life
- Business and strategic options / Policy options
- Technology
- Activities in the North Western Region of Germany

A site visit is planned to a company or research institution in the area.

Invited international experts from China, United Kingdom, Sweden and Switzerland will give insights in their own research. The invited **Keynote Speaker** is Dr. Andrew Bloodworth of the British Geological Survey.

The full program will follow soon.

## Contact

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## Support

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## Cooperation

