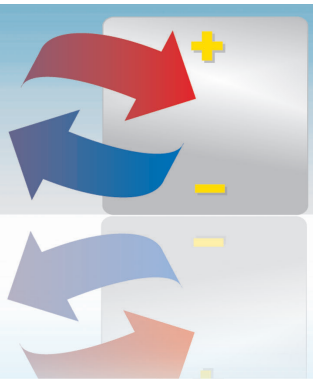

December 9–10, 2010 in Berlin

CALL FOR PAPERS

Thermoelectrics goes Automotive

The demand for energy is increasing and fossil energy sources will continue to cover the lion's share of world energy consumption in the future too. Yet supplies are limited. This is why the focus of attention must move to renewable energies in the medium term. Energy efficiency, environmental compatibility and safety have progressed in leaps and bounds over the last few decades in the automotive industry. But development must go on. However, there are technical and economic limits to the avenues pursued to date – lower energy requirement, greater efficiency in converting energy, distributing energy more in line with demand. New approaches are now needed. The chemical energy bound up in fuel cannot be fully converted into useful mechanical energy. As a result of the systems and operating strategies in place, the greater part of energy supplied will continue to be dissipated as unused thermal energy.

This is where thermoelectrics (TE) and other technologies come in. TE systems, in particular, are capable of converting thermal energy directly into electrical energy and vice versa. It took until the end of the last century to realize their huge significance to industry and transportation. Against the backdrop of conditions continuing to deteriorate dramatically for mobility and transportation, there is now interest in the enormous potential of harnessing waste heat and TE technologies in the automotive industry as well. Their advantages are significant: They have no moving parts and are flexibly adaptable, robust as well as maintenance-free. TE systems come with minimal complexity, providing benefits in terms of space required, weight, integration effort and costs.

The first conference staged by IAV in 2008 at Berlin confirmed amid experts that thermoelectrics is on the move and may be an opportunity for the automotive industry. This is also shown by EU and German-based incentive schemes now under way. Over the next few years, TE must prove it can help provide an answer to satisfying the CO_2 standards automobiles will be required to meet in 2020 in Europe. The course must now be set for lifting the technology from the research laboratories and getting it into industrialization. To this end, the second conference places the focus on the technology's worldwide progress. Summary and themed presentations are to provide the framework for reporting on the current state of research, development, industrialization, system integration and application. Although the spotlight will be on automotive use in keeping with the event's "Thermoelectrics Goes Automotive" banner, synergies relating to other fields of application will be expressly welcome. For this reason, IAV invites international experts from industry and research to demonstrate and discuss the perspectives, trends, risks and demands that are associated with target systems from a wide range of fields in industry and transportation. Oral contributions, posters or exhibits are requested from the fields of:

- Energy-Harvesting
- Storing, transporting and converting thermal energy
- Developing TE materials, modules and systems
- TEG heat exchangers, components, systems and their integration
- Empirical reports on TEG applications

Presentation time including discussion is 30 minutes. The conference languages are English and German. Simultaneous interpretation will be provided.

Director
Daniel Jänsch, IAV GmbH

Program Committee

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Deadlines
Interested parties are requested to submit an abstract (3000 characters), including title, authors/co-authors with company address, phone no., fax no. and e-mail address, by e-mail to the following address:

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Closing date for abstracts:
June 30, 2010

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