

金属基复合材料国家重点实验室与国际铜业协会合作项目举行签约仪式

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2014年8月26日，金属基复合材料国家重点实验室与国际铜业协会(International Copper Alliance)合作项目“超导电性纳米碳/铜基复合材料的制备、表征与性能研究”签约仪式在重点实验室3楼会议室举行。重点实验室主任张荻教授，国际铜业协会代表 Horst Adams 教授，项目组成员以及部分老师和学生参加了会议。

实验室主任张荻教授首先对项目的签约表示祝贺，同时也对 Horst Adams 教授以及国际铜业协会对实验室的长期支持表示感谢。

之后，Horst Adams 教授代表国际铜业协会对国家重点实验在金属基复合材料及功能材料领域所取得的成绩表示高度赞扬，并介绍了铜行业当前的发展形势和前景，以及国际铜业协会在超导电性铜研究方面的布局；希望以此项目为契机，充分发挥国家重点实验室在金属基复合材料方面的人才、技术和设备优势，加快相关材料的研究。

铜由于其仅次于银的导电和导热等优异性能和相对低廉的价格，是当前配电系统中一类应用最为广泛的传统材料；但随着科技的发展，对导线的导电性和载流容量提出了越来越高的要求。超导电性铜(ultra-conductive copper)是一类铜基复合材料，具有较国际退火铜标准(100% ICAS)更高的电导率。超导电性铜的研发将会对能源利用效率和相关器件性能产生重大影响。国际铜业协会联合上海交通大学金属基复合材料国家重点实验室，和大连理工大学精细化工国家重点实验室利用各自平台优势，分别开展铜基复合材料和纳米碳材料的研究，共同开发超导电性铜基复合材料。

Signing ceremony of the cooperation project between the State Key Laboratory of Metal Matrix Composites and the International Copper Association, New York, USA

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On August 26, 2014, the signing ceremony of the cooperation between the State Key Laboratory of Metal Matrix Composites and the International Copper Alliance, "Preparation, Characterization, and Performance of Superconducting Nano-Carbon / Copper Matrix Composites" took place at Shanghai Jiao Tong University.

Picture: Professor Zhang Huan, director of the Key Laboratory, Professor Horst Adams, representative of the International Copper Association, members of the project team, and some teachers and students attended the meeting.

The director of the State Key Laboratory for Metal Matrix Compounds, Professor Zhang Di, first congratulated after the signing of the project, and also thanked Professor Horst Adams and the International Copper Association for their long-term support to the laboratory. Afterwards, Professor Horst Adams, on behalf of the International Copper Association, praised the achievements of national key experiments in the field of metal matrix composites and functional materials, and introduced the current development situation and prospects of the copper industry, as well as the International Copper Association's intention to do ultra-conductive copper research: "I hope that this project will be used as an opportunity to give excellent research opportunities to the talents, and makes effective use of the technology and equipment advantages at the State Key Laboratory of metal matrix composites to accelerate the research on ultra-conductive copper materials."

Copper is one of the most widely used traditional materials in the current power distribution system due to its excellent performance in electrical and thermal conductivity, second only to silver, and relatively low price. However, with the development of technology, the electrical conductivity and current carrying capacity of wires is increasing. Ultra-conductive copper is a type of copper-based composite material that has a higher electrical conductivity than the internationally annealed copper standard (100% ICAS). The development of superconductive copper will have a significant impact on energy efficiency and related device performance. The International Copper Association, in conjunction with the State Key Laboratory of Metal Matrix Composites of Shanghai Jiaotong University and the State Key Laboratory of Fine Chemicals of Dalian University of Technology, have used their respective platform advantages to conduct research on copper-based composite materials and nano-carbon materials to jointly develop ultra-conductivity Copper-based composites.