French-Chinese workshop
“Exploring the new features of metallurgy: combining conventional and emerging fields”

Amphie Appert, Polytech Lille
July 16th, 2018

Program

Université de Lille

cnrs

UMET
Unité Matériaux Et Transformations

Objectives and scopes

With the fast developing 3C (Construction, Computer and Consumer electronic goods) sectors, what are the opportunities and challenges, the metallurgists face? France has traditionally been a great actor in the field of metallurgy in Europe. How well is it fairing now with the competition from Asia and America. Present day needs are not the same as it used to be a decade ago, hence innately disjointed and multidisciplinary character of the metallurgical community presents barriers to creating the required networks for sharing results and information. One of the principal challenges is to encourage scientists to continue acting not as individual researchers but as part of a powerful network collectively analysing and using data generated by the larger community. These challenges must be overcome by intensifying and reinforcing the trends in this direction.

Rapid advances in metallurgical discovery and design will be realized not merely through one-to-one interactions or existing relationships, but also through manifold layers of association among state and Commission agencies, academia, and industry. During this workshop, it is expected to address these issues to learn and understand the directions and roadmaps to take. There are 4 Chinese speakers confirmed for this meeting, who are experts and bring in their expertise and experience into the meeting. This symposium puts together mainly mid-career researchers from different institutes in China and Lille France to address these issues and to discuss and, even to propose, a roadmap.

The workshop focuses on the different aspects of materials science and metallurgy, including the following topics:

-Multifunctional metal matrix (nano)composites
-Oxide-dispersion-strengthened alloys
-New class of high-strength steels
-Interface science by simulation
-Fatigue of metallic materials
-Titanium alloys

Acknowledgments

The organizers are grateful to the UMET laboratory, Université de Lille, Institute de Chevreul, Shanghai University (China) and Shanghai Jiao Tong University (China) for their contributions to organize this workshop. The Polytech Lille is kindly acknowledged for hosting this event.

8:00-9:00	Registration (Room Aarsonval)
9:00-9:15	**Opening ceremony (Amphi Appert)**
Session 1 chaired by Prof. Jean-Bernard Vogt, Dr. Gang JI	
9:15-9:45	**Prof. Frederic Prima (Chimie ParisTech)** New strain-transformable titanium alloys for improved resistance/ductility trade-off
9:45-10:15	**A/Prof. Zhe Chen (Shanghai Jiao Tong University)** Microstructure and mechanical behavior of in-situ TiB_2 nanoparticle reinforced Al composites
10:15-10:45	Coffee break (Room Aarsonval)
Session 2 chaired by A/Prof. Ludovic Thuinet, A/Prof. Zhe Chen	
10:45-11:15	**Prof. Jean-Bernard Vogt (UMET, ULille)** Fatigue of metallic materials
11:15-11:45	**Prof. Changjiang Song (Shanghai University)** Metastable phase high strength steels prepared by near rapid solidification
11:45-12:15	**A/Prof. Marie-Noëlle Avettand-Fenoël (UMET, ULille)** Microstructure and mechanical properties of oxide dispersion strengthened copper developed by friction stir processing
12:15-14:15	Lunch (Ascotel Hotel)
Session 3 chaired by A/Prof. Marie-Noëlle Avettand-Fenoël, Prof. Changjiang Song	
14:15-14:45	**Prof. JianXun Fu (Shanghai University)** Modification of the inclusion in sulfur-bearing steel with Mg-Ca treatment
14:45-15:15	**A/Prof. Rajashekhara Shabadi (UMET, ULille)** Magnesium based materials for bio medical applications
15:15-15:45	**A/Prof. Ludovic Thuinet (UMET, ULille)** Modelling of hcp/fcc heterophase interfaces
15:45-16:15	Coffee break (Room Aarsonval)
Session 4 chaired by A/Prof. Rajashekhara Shabadi, Prof. JianXun Fu	
16:15-16:45	**Prof. XiangRu Chen (Shanghai University)** Effect of niobium on the microstructure and properties of cast iron
16:45-17:15	**Dr. Gang Ji (UMET, ULille)** Tailoring interfacial states of a diamond/Al composite for thermal management applications
17:15-18:00	Lab tour