

2011 SHORT COURSES

Development of Thermodynamic Databases using Thermo-Calc Development of Atomic Mobility Databases using DICTRA

September 19-22, 2011

State College, PA 16801

Introduction

These short courses are designed to acquaint individuals in industry and academia with fundamental concepts and practical experiences in the development of thermodynamic and atomic mobility databases.

Realistic calculations of thermodynamic properties, chemical behaviors, and phase transformations in multi-component systems rely on the accurate and consistent thermodynamic and kinetic databases.

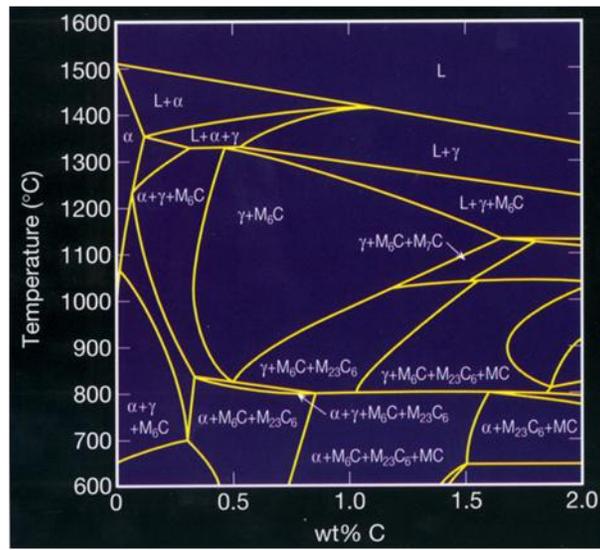
Courses are delivered by Dr. Zi-Kui Liu, Professor of Materials Science and Engineering at The Pennsylvania State University. Prof. Liu is an expert on computational thermodynamics and kinetics, phase equilibria, and database development. He is the Editor-in-Chief of the international journal, CALPHAD.

Organized by:

MaterialsGenome® Inc.



Thermo-Calc Software Inc



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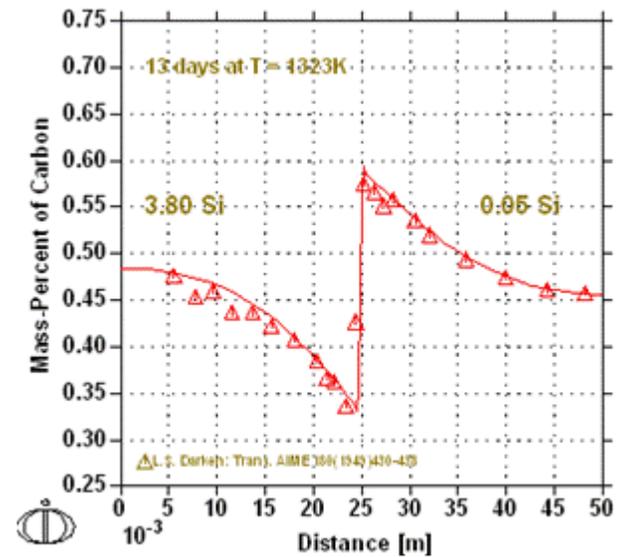
Course Descriptions

Development of Thermodynamic Databases using Thermo-Calc. September 19-21, 2011

In this course, fundamental thermodynamic principles will first be introduced and followed by detailed discussions on the database structure. Hands-on practices will be provided, step-by-step, through defining thermodynamic models, evaluating model parameters, and constructing a thermodynamic database for a model system. Each participant is asked to develop a database of his/her own interest on the 3rd day. The objective of this class is to understand the database structure and how to create a database.

Development of Atomic Mobility Databases using DICTRA. September 22, 2011

This course aims to extend the database development from thermodynamics to atomic mobility. The fundamentals of diffusion and modeling principles of atomic mobility will be presented. Model systems will be analyzed step-by-step. Each participant is encouraged to bring their own cases to the class for discussion.



Course Registration

Fees

Price is available on request. More than one participant from the same nonacademic organization can receive 15% to 25% discount. Participants from academia receive 50% discount and no multi-participant discount.

Web site

<http://www.materialsgenome.com/course.html>

E-mail course2011@materialsgenome.com

Fax (586) 283 4152

Participants Testimonials

- This is a very effective workshop for introducing database assessment.
- Excellent workshop; extremely valuable for those interested in producing thermodynamic & kinetic databases.
- The course was excellent. I'll come back for sure for more.
- A very informative session as techniques, which are not shown in manual, were also demonstrated.