

Glass Processing

Lecture #0. Background and Overview

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Lectures available at:
www.lehigh.edu/imi

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1 IMI-NFG's Glass Processing course, Spring 2015.



US Academic
Advisory Board

Int'l Academic
Advisory Board

Glass Industry
Advisory Board
(US & Int'l)

Mission
www.lehigh.edu/imi
activities across the globe to introduce
new functionality in glass

i.e. specialty glass for value added products

**Int'l Materials
Network**

- **Int'l Research Exchange**
- Faculty Sabbaticals
- **Int'l Conference Travel**

Education / HR Dev.

- **REU's: domestic & int'l**
- **Int'l Winter Schools**
- Outreach:
 - minority groups
 - K-12/pre-college
 - general public
- **R.E.T. program**
- **M.I.T.T. /Mini courses**
- **Glass education w/o Borders**

**Workshops &
Special Events**

- Identify crucial scientific issues thru acad.-industry partnership
- New functionality from cross-discipline
- Advanced techniques
- Challenges of the time: energy, information, biomed

Multimedia Glass Education delivered across the boundaries

>250 of internet topical video modules

General Glass Education: For students & teachers.

Technical Learning Library: For science-engineering students and professionals.

Semester Length Glass Courses

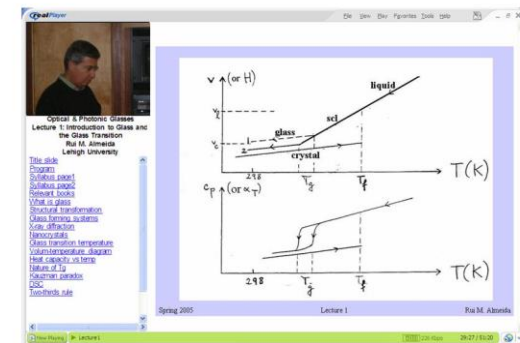
- (i) Multi-instructor team teaching (MITT) courses
- (ii) Mini topical courses by sabbatical faculty

Tutorial & Advanced Topic Single Lectures & Series

Invited Presentations from Important Glass Conferences



Associate Professor K. Miura at Kyoto University in Japan uses one of the 39 lectures from the **Optical & Photonic Glass Course** by Professor Rui Almeida (Portugal) to explain IR vibrational modes to two graduate students. This course is available on DVD or streaming video.



Above image captures the multimedia format used for most videos - merging audio, video and slides with bookmarks for easy navigation.



For the first time IMI makes super-specialized, glass education globally accessible

Chalcogenide Glass

by Yong Choi, S. Korea

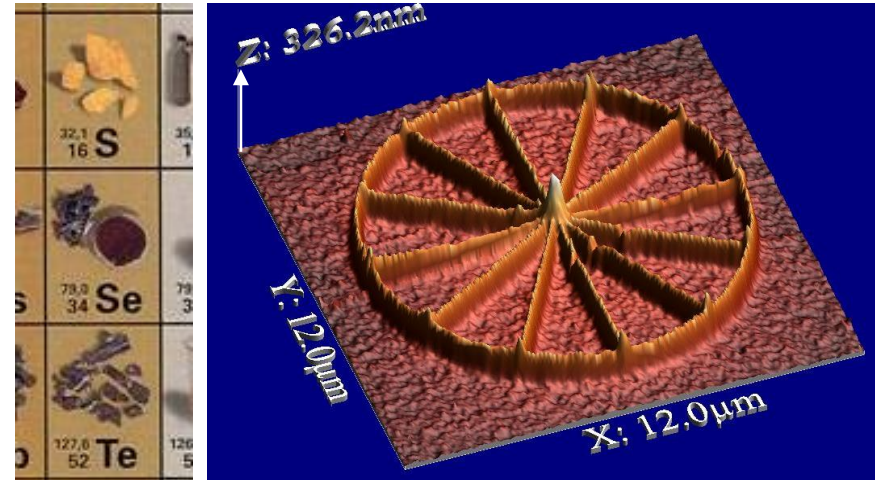
- 84 participants from 26 institutions in 8 countries, as well as 3 US-based companies.

Glass in Energy

by Rui Almeida, Portugal

- 130 persons registered
- 39% from industry representing 11 US and 7 foreign companies
- 59% from academic institutions in 15 countries including 12 US universities.

“.. The online course was excellent. This medium allows students from many universities the opportunity to learn about glasses from experts in the field...” A participant of the first course ever on Chalcogenide Glasses.



Video lectures from the course on Chalcogenide Glasses can be found online :

www.lehigh.edu/imi/librarytech.html

Glass Processing: Vital statistics

| | |
|--|------------|
| Persons registered for the course | 225 |
| From industry | 94 |
| From universities | 77 |
| Others | 55 |

Participants come from 25 countries

| | |
|----------------|---------------------|
| Algeria | Korea |
| Argentina | Poland |
| Belgium | Portugal |
| Brazil | Republic of Moldova |
| China | Russia |
| Czech Republic | South Korea |
| Denmark | Sweden |
| Egypt | Taiwan |
| France | Thailand |
| India | Turkey |
| Italy | United Kingdom |
| Japan | United States |
| | Uruguay |



42 Universities and 25 Companies

| | | |
|--|---|---|
| Aalborg University | Lehigh University | Université Pierre et Marie Curie, Paris |
| AGH University of Science and Technology | Missouri S&T | University of Delaware |
| Alexandria University | National Degree College | University of New Mexico |
| Alfred University | National United University | University of North Texas |
| Austin Peay State University | Penn State University | University of Padua |
| Banaras Hindu University | Punjab Technical University, Kapurthala | University of Pardubice |
| Chemistry Institute-UNESP | Rensselaer Polytechnic Institute | University of Paris Sud |
| Chongqing University | Royal Institute of Technology | University of São Paulo |
| Delhi university | Rutgers University | University of Sheffield |
| Fed. University of São Carlos | Stanford | University Of Skikda |
| Federal Institute Of Maranhao | The M.S. University of Baroda | |
| Indian Institute Of Technology | The University of New Mexico | |
| Indian School of Mines,Dhanbad | Universidad de la Republica | |
| Instituto Superior Técnico, | universidad Nacional del sur | |
| University of Lisbon | Universidade Estadual | |
| Iowa State University | Paulista | |
| Istanbul Technical University | Université de Rennes 1 | |



For Students Taking for Credit

- Any official university credit for this course must be arranged separately with the local faculty adviser/instructor. The IMI-NFG has no capacity to issue university credit.
- Requesting lecturers to provide homework assignments with their lectures to help students gain practice with the concepts. These assignments can also be used by the student's local university faculty for assessing the student's performance.
- Collecting homework and grading is the responsibility of the local faculty, and not the lecturer. The IMI has requested that the lecturers supply solutions to all homework assignments and we can provide to the local faculty advisers who request them.

Student & Local Faculty Responsibility

- Come up with your own specific plan for overall student grading
- Student submit any required homework to your local faculty for grading
- Local faculty to grade any required Home Work(HW)
- IMI will supply any HW solutions from instructors to local faculty
- Contact IMI if HW solutions are needed at: imi@Lehigh.edu



Contact us at

www.Lehigh.edu/IMI

Email: IMI@Lehigh.edu

