Lecture #0. Background and Overview

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Lectures available at:
www.lehigh.edu/imi

Sponsored by US National Science Foundation (DMR-0844014)
Mission

Focus, coordinate and promote research and educational (R&E) activities across the globe to introduce new functionality in glass, i.e. specialty glass for value added products.

US Academic Advisory Board

Int’l Academic Advisory Board

Glass Industry Advisory Board (US & Int’l)

www.lehigh.edu/imi

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

Int’l Materials Network
- Int’l Research Exchange
- Faculty Sabbaticals
- Int’l Conference Travel

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.
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.

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

“.. 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

<table>
<thead>
<tr>
<th>Persons registered for the course</th>
<th>225</th>
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<tbody>
<tr>
<td>From industry</td>
<td>94</td>
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<tr>
<td>From universities</td>
<td>77</td>
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<tr>
<td>Others</td>
<td>55</td>
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Participants come from 25 countries

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<tr>
<th>Algeria</th>
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<td>Argentina</td>
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<td>Brazil</td>
<td>Republic of Moldova</td>
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<td>China</td>
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<td>Japan</td>
<td>United States</td>
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<td>Uruguay</td>
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42 Universities and 25 Companies

Aalborg University
AGH University of Science and Technology
Alexandria University
Alfred University
Austin Peay State University
Banaras Hindu University
Chemistry Institute-UNESP
Chongqing University
Delhi University
Fed. University of Sao Carlos
Federal Institute of Maranhao
Indian Institute of Technology
Indian School of Mines, Dhanbad
Instituto Superior Técnico, University of Lisbon
Iowa State University
Istanbul Technical University
Lehigh University
Missouri S&T
National Degree College
National United University
Penn State University
Punjab Technical University, Kapurthala
Rensselaer Polytechnic Institute
Royal Institute of Technology
Rutgers University
Stanford
The M.S. University of Baroda
The University of New Mexico
Universidad de la Republica
universidad Nacional del sur
Universidade Estadual
Paulista
Université de Rennes 1

Université Pierre et Marie Curie, Paris
University of Delaware
University of New Mexico
University of North Texas
University of Padua
University of Pardubice
University of Paris Sud
University of Sao Paulo
University of Sheffield
University Of Skikda
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