

**The 33<sup>rd</sup> Annual  
Short Course**

**"ADVANCES IN EMULSION  
POLYMERIZATION  
AND LATEX TECHNOLOGY"**

A One-Week Short Course  
held at the Hotel Belvédère  
in the Davos resort area  
of Switzerland

**August 2-6, 2010**

**COURSE DIRECTORS**

**Dr. Mohamed S. El-Aasser**  
Professor of Chemical Engineering  
And Vice President, Lehigh University

**Dr. F. Joseph Schork**  
Professor and Chair, Department of  
Chemical & Biomolecular Engineering  
University of Maryland

**COURSE DESIGN**

The course is an in-depth study of the synthesis, characterization, and properties of high polymer latexes. The subject matter includes a balance of theory and practical problems. Lectures will begin with introductory material and will progress through recent research results. Lectures will be given in English, and are held in the morning, the late afternoon, and the evening, with a large break in the afternoon to enjoy the recreational activities of the area and allow for interactions between the participants. Organized hikes and visits to points of interest in and around Davos will be arranged for some of the afternoons.

**PARTICIPANTS**

The course is designed for engineers and scientists who are actively involved in emulsion work, as well as for those who wish to develop expertise in the area. A basic background in chemistry will be assumed. All participants will receive a set of course notes for the lectures.

**COURSE FEE**

The Registration Fee for the short course is US \$1,400. Registrations paid before June 30 will receive a 5% discount. A 10% discount is offered for multiple participants from the same company if all register at the same time. The Registration Fee will cover attendance, coffee breaks, a welcome reception Sunday evening, a final reception on Thursday evening, and a set of course notes. Payment may be made by check, wire transfer or credit card. Please contact us at [DavosCourse@gmail.com](mailto:DavosCourse@gmail.com) for information on wire transfer or credit card payment. Refund requests received before June 30 will be honored in full.

*Course Fee is due on June 30. Refund requests received before this date will be honored in full.*

**LOCATION**

The course will be held at the Hotel Belvédère in Davos Platz in the Graubunden resort area of Switzerland. Numerous recreational opportunities are available to both participants and their guests during the short course.

The Steigenberger Belvédère Hotel is a five-star hotel located in the center of Davos, 0.8 km from the railway station. The hotel, built in 1875, is a harmonious combination of grand past with lively present, of international standards with traditional Swiss hospitality. The view is magnificent in any season in this sumptuously appointed hotel centrally located near all of Davos's many attractions and sports facilities. Spacious, comfortable rooms decorated in romantic-rustic fashion with wooden paneling or in an elegant, modern style, wish you a warm and homely welcome. Large commons areas allow informal conversations between course participants and course lecturers outside of the formal sessions.

Davos is about 100 km north of St. Moritz in southeastern Switzerland. It can be reached by air by flying into Zurich, and then taking Swiss Rail to Davos Platz, with a change of trains in Landquart. From northern Europe, the most common rail route is via Zurich and Landquart to Davos Platz. From Italy the best routing is from Milan via Landquart to Davos Platz. Driving to Davos should be no problem, since the roads into Davos, although mountainous, are good.

## HOTEL RATES

**CHF 182** for superior single room with bath

**CHF 151** for standard room with bath

**CHF 118** supplement for a double room  
(second person)

Rates for children are available from the hotel.

Rates include a buffet breakfast, a three course fixed-menu dinner elegantly served in the Main Dining Room with the course participants, and free use of the public transportation system in Davos (including selected mountain railways and cable cars). Conference rates will also apply for early arrival or extended stays.

## REGISTRATION

Registration will be limited to 60 course participants. A participant may register by sending the information on the attached Registration Form to Professor Schork by mail, e-mail or fax. On-line registration is available at our website. Checks payable to the Emulsion Polymer Course may accompany registration requests. Alternatively, participants will be invoiced for the course fee upon receipt of the information above. Payment by bank transfer or credit card can be arranged by request. Only the registration fee will be collected by the course organizers. The conference organizers will make hotel reservations for each participant at the time of registration. Confirmation of the reservation will be sent to the participant by the Hotel. Participants needing changes to hotel reservations should deal directly with the Hotel Belvédère. Each participant will be charged directly by the hotel for room costs and extras.

Please register as early as possible so that a course opening can be reserved in your name.

## LECTURERS

Michael Cunningham, Professor of Chemical Engineering, Queens University

Mohamed S. El-Aasser, Vice President and Professor of Chemical Engineering, Lehigh University

Andrew Klein, Professor of Chemical Engineering, Lehigh University

Do Ik Lee, Adjunct Professor of Paper Engineering, Chemical Engineering & Imaging, Western Michigan University

Gary W. Poehlein, Professor Emeritus, Chemical Engineering, Georgia Institute of Technology

F. Joseph Schork, Professor & Chair of Chemical & Biomolecular Engineering, University of Maryland

**For more information, or to register,  
please contact:**

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405-0523

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or [FJSchork@umd.edu](mailto:FJSchork@umd.edu)

**OR**

**visit our web site  
(including on-line registration) at:**

<http://www.DavosCourse.com>

## COURSE SCHEDULE

### MONDAY, August 2, 2010

- 08:30 - 10:00 Kinetics of Free Radical-Initiated Polymerization  
(F. J. Schork)
- 10:00 - 10:30 Coffee Break
- 10:30 - 12:00 Emulsion Polymerization Mechanisms and Kinetics  
(G. W. Poehlein)
- 16:30 - 18:00 Semi-Continuous Emulsion Polymerization and  
Structured Latexes (M. Cunningham)
- 20:00 - 21:45 The Role of Surfactants in Emulsion Polymerization  
(M. S. El-Aasser)

### TUESDAY, August 3, 2010

- 08:30 - 10:00 Engineering of Emulsion Polymerization Reactors  
(G. W. Poehlein)
- 10:00 - 10:30 Coffee Break
- 10:30 - 12:00 High Solids Latex Technology (D. I. Lee)
- 16:30 - 18:00 Latex Rheology (F. J. Schork)
- 20:00 - 21:30 Discussion of Applications and Problems Submitted by  
Course Participants

### WEDNESDAY, August 4, 2010

- 08:30 - 10:00 Stabilization Mechanisms in Aqueous and Non-Aqueous  
Latexes (M. S. El-Aasser)
- 10:00 - 10:30 Coffee Break
- 10:30 - 12:00 The Structure of Latex-Bound Pigment Coatings  
(D.I. Lee)
- 16:30 - 18:00 Film Formation and Cohesive Strength Development  
from Latex Systems (A. Klein)
- 20:00 - 21:45 Advances in Miniemulsion Polymerization  
(M. S. El-Aasser)

### THURSDAY, August 5, 2010

- 08:30 - 10:00 Living-Controlled-Radical Polymerization in Bulk,  
Miniemulsion and Emulsion (M. Cunningham)
- 10:00 - 10:30 Coffee Break
- 10:30 - 12:00 Industrial Uses of Latexes and Preparation of  
VOC-Free Latexes (D. I. Lee)
- 16:30 - 18:00 Mixing and Scale-Up in Emulsion Polymerization  
Reactors (A. Klein)
- 20:00 - 21:00 Discussion of Applications and Problems Submitted by  
Course Participants

### FRIDAY, August 6, 2010

- 08:30 - 10:00 Future of Polymer Colloids (M. Cunningham)
- 10:00 - 10:30 Coffee Break
- 10:30 - 12:00 Sensors and Control of Emulsion Polymerization  
Reactors (F. J. Schork)
- 12:00 End of Course**