Rheology Seminar

May, 22-23, 2019, Politecnico di Milano Dipartimento CMIC “Giulio Natta”
Piazza Leonardo da Vinci 32 Milano - Edificio 6-Sala conferenze Giulio Natta

Program Day 1

09:00	REGISTRATION AND INTRODUCTION
09:30	Rheology theory: viscosity and flow behavior - Introduction: rheology, viscoelastic behavior - Simple viscosity test methods: finger test etc., flow cups, capillary and falling ball viscometers, rotational tests using relative and absolute measuring systems, concentric cylinders, coneplate, parallel plates - Definition of terms: shear stress, shear rate, (shear) viscosity, Newton‘s viscosity law - Rotational tests: controlled shear rate (CSR), controlled shear stress (CSS), application diagrams with examples of industrial users - Ideally viscous (Newtonian) flow behavior - Shear-thinning (pseudoplastic) flow behavior, zeroshear viscosity of polymers
10:30	COFFEE BREAK
10:45	for 2 groups - Group 1 Hands-on session - Group 2 Continued: rheology theory
12:30	LUNCH
13:30	for 2 groups - Group 1 Continued: rheology theory - Group 2 Hands-on session
14:45	COFFEE BREAK
15:00	Continued rheology theory: viscosity and flow behavior - Shear thickening (dilatant) flow behavior - Yield point, different test conditions and analysis Methods - Time-dependent flow behavior: structure break and recovery, thixotropic behavior, curing - Temperature-dependent flow behavior: heating, cooling, hardening
16:15	Application discussion
17:00	End
20:00	DINNER

The seminar will be held at Anton Paar Italia, in English language, by Thomas Mezger.

Price includes:
Rheo Book “Applied Rheology” by Thomas Mezger, coffee, lunches, dinner

2 days course:
May 22-23, 2019 all inclusive: (dinner)
Euro 1250.00

1 day course:
(excluding dinner)
Euro 600.00

To register, please send an email to

info.it@anton-paar.com
with the following details:

- Contact Name & Surname
- Company
- Email address
- Contact Number

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Program Day 2

09:00	Rheology theory: viscosity and flow behavior - Introduction: viscoelastic behavior - Definition of terms: (shear) strain or deformation, shear modulus, Hooke‘s elasticity law, Young’s modulus, Poisson’s ratio, strain rate (shear rate) - Ideally elastic deformation behavior - Oscillatory tests: introduction, definition of the terms: Storage and loss modulus, loss or damping factor, vector diagram, application diagrams with examples of industrial users - Amplitude sweep: linear viscoelastic (LVE) range
10:30	COFFEE BREAK
10:45	for 2 groups - Group 1 Hands-on session - Group 2 Continued: rheology theory
12:30	LUNCH
13:30	for 2 groups - Group 1 Continued: rheology theory - Group 2 Hands-on session
14:45	COFFEE BREAK
15:00	Continued rheology theory: elasticity and viscoelastic behavior - Frequency sweep: unlinked polymers and curve crossover point, complex viscosity; crosslinked polymers; dispersions and gels: storage stability - Time-dependent viscoelastic behavior: Structure break and recovery, thixotropic behavior, curing - Temperature-dependent viscoelastic behavior (DMTA): Melting, glass transition; crystallization; gel formation, sol/gel transition; hardening, curing - Solid torsion bar tests
16:00	Application discussion
18:00	END

Early bird registration,
(December 20th, 2018)

Price includes:
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2 days course:
May 22-23, 2019 all inclusive: (dinner)
Euro 1100.00

1 day course:
(excluding dinner)
Euro 500.00

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