



NATIONAL INSTITUTE FOR LASERS, PLASMA AND RADIATION
PHYSICS

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COST ACTION P21

“ THE PHYSICS OF DROPLETS ”

JOINT CONFERENCE of the
7TH MANAGEMENT COMMITTEE MEETING
and
WORKING GROUPS MEETINGS

May 4th - 6th, 2009

Romanian Parliament House
Hall: Nicolae Balcescu,
Entrance A3S2, Str. IZVOR
Bucharest

Organisers

Management Committee Chair: Prof. Nicolas Vandewalle
Dr. Stéphane Dorbolo

Local organiser: Prof. Mihail-Lucian Pascu
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SCIENTIFIC PROGRAMME

MAY 3rd 2009

Arrival and accommodation

MAY 4th 2009 – DAY 1

8:30 – 9:30
Registration

9:30 – 10:00
Opening session

10:00 – 10:30
Plenary session
Chair: Michele Adler

S. Beauloye
General Presentation on COST and the Open Call

10:30 – 11:00
COFFEE BREAK

11:00 – 11:30
Working Group 2 meeting (joint with WG1 and WG3 meetings)
Chair: Libero Liggieri

General Interest talk
S. Limage, M. Schmitt-Rozières, S. Vincent-Bonnieu, C. Dominici, M. Antoni
Nanoparticles stabilized emulsions: Behind the Venus veil of droplets

11:30 – 12:30
Working Group 2 meeting (joint with WG1 and WG3 meetings) – continued
Chair: Libero Liggieri

11:30 – 11:50
A. Javadi, J. Krägel, P. Pandolfini, G. Loglio, V.I. Kovalchuk, E. V. Aksenenko, F. Ravera,
L. Liggieri, R. Miller
Short time dynamic interfacial tension as measured with drop capillary pressure technique

11:50 – 12:10

S. Caserta, G. Tomaiuolo, S. Guido

Non-Newtonian effects on drop deformation under microconfined shear flow

12:10 – 12:30

A. Moskal

Dynamics of aerosol aggregates - theory and practical applications

12:30 – 13:30

LUNCH (on place, in a room adjacent to the conference hall)

13:30 – 15:30

Working Group 2 meeting (joint with WG1 and WG3 meetings) – continued

Chair: Thodoris Karapantsios

13:30 – 13:50

L. Liggieri, F. Ravera, E. Santini, M. Ferrari, R. Miller, G. Loglio, V. Dutschk, C. Whitby, D. Fornasiero, J. Ralston.

Interfacial properties of nanoparticle-surfactant systems

13:50 – 14:10

K.G. Marinova, E.S. Basheva, I.B. Ivanov

Physico-chemical factors controlling the foamability and foam stability of milk proteins

14:10 – 14:30

T. Karapantsios, M. Kostoglou

Electrical resistance tomography for foam and emulsion stability measurements

14:30 – 14:50

A. Niecikowska, M. Krasowska, J. Ralston, K. Malysa

Influence of surface charge and hydrophobicity on kinetics of the three phase contact formation during bubble collision with TiO₂ surface

14:50 – 15:10

Y. Couder, A. Eddi, E. Fort

Droplets walking on a liquid interface: a macroscopic type of wave-particle duality

15:10 – 15:30

K. Szczepanowicz, D. Dronka-Góra, L. Szyk-Warszyńska, P. Warszynski

Encapsulation of emulsion drops

15:30 – 16:00

Working Group 3 meeting (joint with WG1 and WG2 meetings)

Chair: Mihail Lucian Pascu

General Interest talk

M. Muradoglu

Impact and spreading of a microdroplet on a solid wall

16:00 – 16:30
COFFEE BREAK

16:30 – 18:30

Working Group 3 meeting (joint with WG1 and WG2 meetings) – continued

Chair: Michele Ferrari

16:30 – 16:50

D. Kiselev, M. Moret, L. Bonacina, J.P. Wolf

Use of microdroplets in the aerosol analysis

16:50 – 17:10

M.L. Pascu, I.R. Andrei, C. Ticos, V. Nastasa, T. Beica

Laser beams interactions with microdroplets

17:10 – 17:30

K. Sadlej, M.L. Ekiel-Jezewska, E. Wajnryb

Destabilization of suspension drops conveyed by Poiseuille flow inside a channel

17:30 – 17:50

S. Antohe, I. Enculescu, L. Ion

Preparation and characterization of A_2B_6 nanowires arrays for photovoltaic applications

17:50 – 18:10

F. Albert, M. Schmidt

Laser droplet joining – systems, process and applications

18:10 – 18:30

M. Weigl, M. Schmidt

Laser droplet welding of dissimilar materials

18:30 Visit of the Romanian Parliament Building

19:30
DINNER

MAY 5th 2009, DAY 2

9:00 – 9:30

Working Group 1 meeting (joint with WG2 and WG3 meetings)

Chair: Frieder Mugele

General Interest talk

M. T. Kreutzer, V. van Steijn, C.R. Kleijn, P. Parthiban, S.A. Khan
Instabilities in segmented flow – bubble formation and partial wetting

9:30 – 10:30

Working Group 1 meeting (joint with WG2 and WG3 meetings)

Chair: Frieder Mugele

9:30 – 9:50

M. Schmitt-Rozières, J. Krägel, D.O. Grigoriev, L. Liggieri, R. Miller, S. Vincent-Bonnieu, M. Antoni

From spherical to polymorphous droplets in water/oil emulsions

9:50 – 10:10

Y. Tsori, S. Samin

Phase separation transition in liquids and polymers induced by electric field gradients

10:10 – 10:30

S. Tcholakova, N. Denkov, D. Hristova,

Emulsification and emulsion stability of silica-charged silicone oils

10:30 – 11:00
COFFEE BREAK

11:00 – 12:40

Working Group 1 meeting (joint with WG2 and WG3 meetings) - continued

Chair: Nicolas Vandewalle

11:00 – 11:20

N. Denkov, S. Tcholakova, K. Golemanov, A. Lips

Jamming in sheared foams and emulsions, explained by critical instability of the films between neighboring bubbles and drops

11:20 – 11:40

D. Terwagne, T. Gilet, N. Vandewalle, S. Dorbolo

A drop of spectroscopy

11:40 – 12:00

A. Rozhkov, B. Prunet-Foch, M. Vignes-Adler

Impact of drops of surfactant solutions

12:00 – 12:20

M.L. Ekiel-Jeżewska, E. Wajnryb

Micro-droplets of a dense suspension settling under gravity in a viscous fluid

12:20 – 12:40

V. Palero, J. Lobera, P. Brunet, M.P Arroyo,

3D velocity measurement in an oscillating drop

12:40 – 13:40

LUNCH (on place, in a room adjacent to the conference hall)

13:40 – 15:30

POSTER SESSION (See the List of Posters at the end of this program): POSTERS TO BE DISPLAYED ON 4th OF MAY AT 12:30

15:30 – 16:00

FREE DISCUSSIONS ABOUT JOINT WG1, WG2, WG3 PROJECTS

16:00 – 16:30

COFFEE BREAK

16:30 – 18:00 Management Committee meeting (part I)

Draft Agenda - Seventh Management Committee Meeting

- 1. Welcome to participants**
- 2. Adoption of agenda**
- 3. Minutes of last meeting**
- 4. Report from the Scientific Officer**
 - News from the COST Office
 - Status of Action
 - Number of Signatories
 - Budget Status, budget allocation process
- 5. Year Budget planning**
- 6. STSM status, applications**
- 7. Publications, annual report**
- 8. Evaluations**
- 9. Request for new members**
- 10. Non-COST participations**
- 11. Web news**
- 12. Progress report of working groups**
- 13. Long-term planning**
- 14. Time and place of next meeting**
- 15. AOB**

19:00 OPTIONAL DINNER

MAY 6th 2009, DAY 3

9:00 – 10:30

FREE DISCUSSIONS ABOUT JOINT WG1, WG2, WG3 PROJECTS – continued

10:30 – 11:00

COFFEE BREAK

11:00 – 12:30 Management Committee meeting (part II)

12:30 – 13:30

LUNCH (on place, in a room adjacent to the conference hall)

13:30 END OF THE MEETING

! A social program is organised on the 6th of May to visit Dracula's real tomb at 40 km north of Bucharest.



LIST OF POSTERS

1. **A. J. Meagher, A. van der Net, D. Weaire, S. Hutzler**, *Diffusion properties of crystalline microbubbles.*
2. **C. Surdu-Bob, M. Badulescu**, *Synthesis of metal spheres obtained in an anodic arc plasma in high vacuum.*
3. **D. Dimitrova, F. Ravera, L. Liggieri, S. Tcholakova, K. Marinova**, *Surface dilatational rheological properties of surfactant mixtures.*
4. **F. Ravera, L. Liggieri, M. Ferrari, G. Loglio, P. Pandolfini**, *Dilatational viscoelasticity measurement by the oscillating bubble/drop techniques using a capillary pressure tensiometer.*
5. **M. Dicu, A. Staicu, A. Smarandache, I. R. Andrei, M. Ferrari, L. Liggieri, L. Frunza, M. L. Pascu**, *Spectral studies of medicines to be delivered in microdroplets form.*
6. **M. Ferrari, L. Liggieri, F. Ravera, M. L. Pascu, M. Dicu**, *Wetting of solvents for drug delivery on superhydrophobic surfaces*
7. **N. Vandewalle**, *Antibubbles, liquid onions and mayonnaise droplets.*
8. **S. Henin, Y. Petit, D. Kiselev, J. Kasparian, J. P. Wolf**, *Contribution of droplet explosion to charge release in laser-assisted condensation.*
9. **S. Kevorkian, A. Manea, A. Dinischiotu, M. Dicu, M. L. Pascu, M. Costache, B. Carstocea**, *Preliminary study of vancomycin on a normal epithelial retinal cell line.*
10. **T. Beica, I. Zgura, L. Frunza, L. C. Nistor, C. Morosanu**, *Wettability properties of textile materials by water droplets, optically visualized.*
11. **T.R. Sosnowski**, *Atomization of pharmaceutical solutions.*
12. **T. Beica, I. Zgura, L. Frunza, I. R. Andrei, M. Dicu, M. L. Pascu**, *Surface tension of drug solutions.*
13. **I. R. Andrei, M. Ferrari, L. Liggieri, M. Dicu, V. Nastasa, M. L. Pascu**, *Characterization of microdroplets which contain solutions of medicines.*
14. **M. P. Boneva, K. D. Danov, N. C. Christov, P. A. Kralchevsky**, *Strong hybrid electro-gravity-induced capillary attraction between charged particles at a fluid interface*
15. **L. Liggieri, G. Loglio, R. Miller, A. Steinchen, M. Antoni, M. Roziere, D. Clause, L. del Gaudio, C. Dalmazzone, T. Karapantsios, V. Dutschk, R. G. Rubio, G. Picker, T. Dewandre, O. Minister, S. Vincent-Bonnieu**, *“FASES: an instrument for Fundamental and Applied Studies of Emulsions Stability”*

POSTERS POST-DEADLINE

- 16. J. Moreno, M.A. Trelles, M. L. Pascu, J. Royo de la Torre, *Effect of a Nd:YAG laser in the treatment of varices of the great saphenous vein after polidocanol microfoam injection.***

