

**ICMF 14**  
ekaterinburg  
**4-8 JULY 2016**

**14th International Conference on  
Magnetic Fluids**

**Ekaterinburg, Russia**

# Programme

**Ekaterinburg 2016**

## **Organising Committee:**

Prof. Alexey Ivanov, **Chairman**

Prof. Andrey Yu. Zubarev, **Co-Chairman, Head of the Conference Scientific Committee**

Prof. Sofia S. Kantorovich, **Vice Chairman**

Prof. Ekaterina A. Elfimova, **Vice Chairman, Head of the Local Organising Committee**

Dr. Philip Camp

Dr. Marcello Sega

Dr. Pedro Sanchez

Dr. Larisa Iskakova

## **Local Organising Committee:**

Dr. Elena Pyanzina

Dr. Ekaterina Novak

Alla Dobroserdova

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Ekaterina V. Turisheva

Ekaterina V. Vtulkina

Julia E. Nehoroshkova

Dr. Victoria V. Polyakova

Dr. Vladimir S. Zverev

# Venue

## World Trade Center Ekaterinburg (WTC)

Address: Kuibyshev st. 44, letter “D”, Ekaterinburg.

## **Hotels**

### Park Inn

Address: Mamina-Sibiryaka st., 98, Ekaterinburg.

T: +7 (343) 216 60 00

### Panorama Business Hotel

Address: Kuibyshev st., 44 letter “D”, Ekaterinburg.

T: + 7(343) 310 02 10

### VUZ-Servis

Address: Kominterna st., 11, Ekaterinburg.

T: +7 (343) 374 72 05

## **How to get to WTC**

### **From Park Inn**

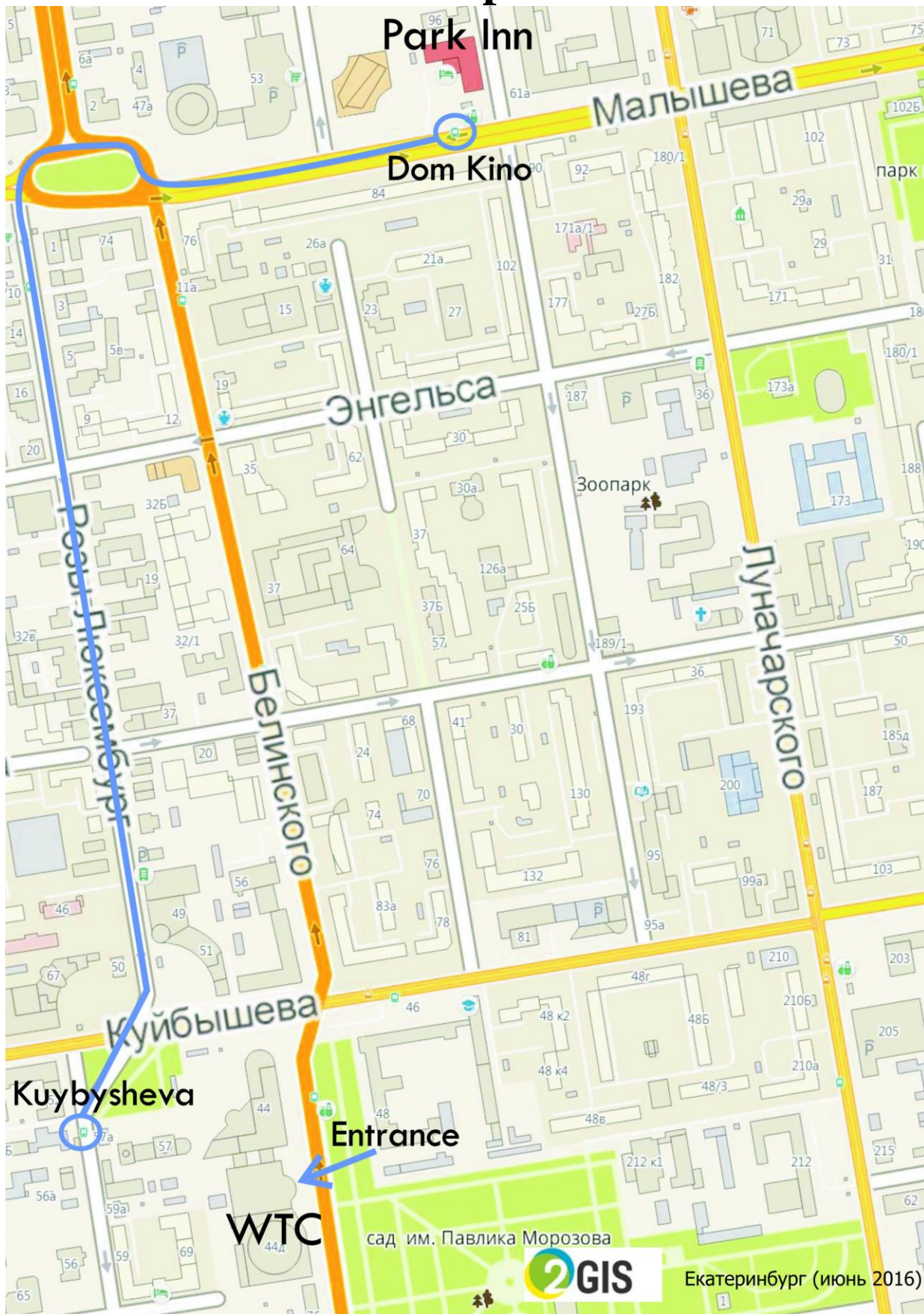
Initial stop: Dom Kino (see Map 1), bus **067**, **077**, trolleybus **6**, **20**. Last stop: Kuybysheva. Then go on foot (see Map 1).

### **From VUZ-Servis**

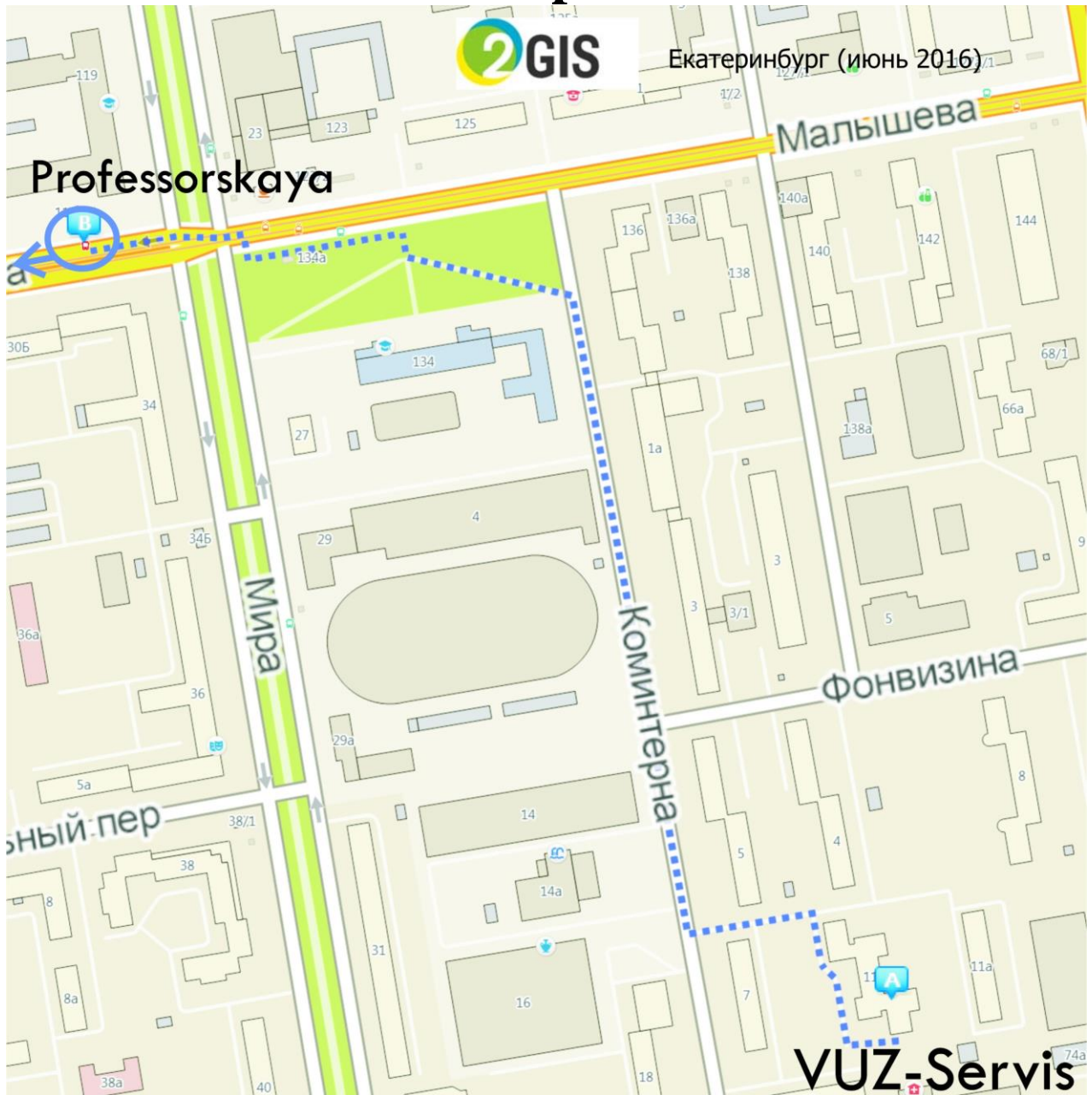
First you need to go on foot (see Map 2). Initial stop: Professorskaya (see Map 2), bus **067**, **077**, trolleybus **6**, **20**. Last stop: Kuybysheva. Then go on foot (see Map 1).

Fare is 26 rubles; ticket can be purchased during the trip, conductor will come up to you. Ticket is valid for one trip only.

# Map 1



# Map 2



# Scientific Program

## **Sunday, 3rd of July 2016**

15:30 – 19:00

**Registration**

**Welcome Party**

World Trade Center Ekaterinburg: Kuibyshev st. 44, letter “D”

**Monday, 4th of July 2016**

09:00 – 10:00 **Registration**

10:00 – 10:30 **Opening**

**Invited Talk**

10:30 – 11:10 IT-1 (Invited Speaker 1)

C. Lopes Filomeno, M. Kouyaté, A. F. C. Campos, F. Cousin, G. Demouchy, E. Dubois, L. Michot, R. Perzynski, V. Peyre, J. Sirieix-Plénet, F. A. Tourinho  
*Ionic Magnetic Fluids in Polar Solvents with Tuned Counter-Ions*

11:10 – 11:30 Coffee break

**Section: Physical Properties**  
**Chairman: S. Odenbach**

11:30 – 12:00 PP-PL-1 (Plenary Lecture 1)

P. Kopcansky, N. Tomasovicova, M. Timko, V. Gdovinova, J. Majorosova, N. Eber, T. Toth-Katona, J. Jadzyn, V. Haramus, M. V. Avdeev, V. I. Petrenko, Y. Raikher  
*Ferronematics – Way To Liquid Crystalline Sensor of Magnetic Field*

12:00 – 12:20 PP-OP-1 (Oral 1)

I. Appel, N. Sebastian, A. Eremin, R. Stannarius, S. Behrens  
*Stable Suspensions of Mesogen-Hybridized Magnetic Nanoparticles in Thermotropic Liquid Crystals*

12:20 – 12:40 PP-OP-2 (Oral 2)

V. V. Chekanov, N. V. Kandaurova, V. S. Chekanov  
*Phase Autowaves of the Electrode Layer in the Electrochemical Cell with a Magnetic Fluid*

12:40 – 13:00 PP-OP-3 (Oral 3)

D. Eberbeck, S. Wenk, P. Ilg, F. Wiekhorst  
*Effect of Magnetic Structure and Dipolar Interaction on Non-Linear Magnetisation Dynamics*

13:00 – 14:00 Lunch

14:00 – 15:30 **Poster Session 1**

Physical Properties; Magnetopolymer Composites



**Section: Physical Properties****Chairman: F. Gonzalez-Caballero**

- 15:30 – 16:00 PP-PL-2 (Plenary Lecture 2)  
J. Philip  
*Magnetic Fluids: Insights from Thermal, Optical and Intermolecular Interactions Experiments*
- 16:00 – 16:20 PP-OP-4 (Oral 4)  
 V. Gdovinova, N. Tomasovicova, L. Balejcikova, J. Majorosova, V. Haramus, V. I. Petrenko, M. V. Avdeev, P. Kopcansky  
*Effect of Magnetic Nanoparticles on the Liquid Crystalline Ordering of Amyloid Fibrils*
- 16:20 – 16:40 PP-OP-5 (Oral 5)  
K. Parekh, R. V. Upadhyay  
*The Effect of Magnetic Field Induced Aggregates on Ultrasound Propagation in Aqueous Magnetic Fluid*
- 16:40 – 17:00 Coffee break

**Section: Physical Properties****Chairman: A. Fuguriedo Neto**

- 17:00 – 17:20 PP-OP-6 (Oral 6)  
H. Ezzaier, B. A. Abedslam, A. Zubarev, P. Khuzir, G. Bossis, J. Alves-Marins  
*Kinetics and Microfluidic Separation of Magnetic Nanoparticles on An Ordered Array of Magnetized Micro-Pillars*
- 17:20 – 17:40 PP-OP-7 (Oral 7)  
A. V. Lebedev  
*Viscosity of Magnetic Fluids and Rotational Mobility of Particles Are Two Different Things*
- 17:40 – 18:00 PP-OP-8 (Oral 8)  
 V. Bashtovoi, A. Reks, A. Baev, Al-Jhaish Taha Malik Mansoor  
*Topological Instability of Semi-Bounded Magnetic Fluid Drop Under Influence of Magnetic and Ultrasound Fields*
- 18:00 – 18:20 PP-OP-9 (Oral 9)  
A. M. Schmidt, M. Kundt, O. Utan, L. Sieffert  
*A Novel Route to Ferronematic Phases*

## Tuesday, 5th of July 2016

### Invited Talk

- 09:00 – 09:40 IT-2 (Invited Speaker 2)  
G. V. Kurl'yanskaya, Iu. P. Novoselova, V. V. Schupletsova, R. Andrade,  
 N. A. Dunec, L. S. Litvinova, I. A. Khlusov, A. P. Safronov, K. A. Yurova,  
 N. A. Kulesh  
*Nanoparticles for Magnetic Biosensing Systems*

### Section: Heat and Mass Transfer

Chairman: *M. Krakov*

- 09:40 – 10:10 HMT-PL-1 (Plenary Lecture 3)  
H. Yamaguchi, Y. Iwamoto  
*Energy Transport in Cooling Device By Magnetic Fluid*
- 10:10 – 10:40 HMT-PL-2 (Plenary Lecture 4)  
 L. Sehnem, R. Aquino, A. F. C Campos, F. A. Tourinho, J. Depeyro,  
A. M. Figueiredo Neto  
*Thermodiffusion in Ionic Magnetic Colloids*
- 10:40 – 11:00 HMT-OP-1 (Oral 10)  
Y. Iwamoto, H. Yamasaki, J. Cuya, Y. Ido, B. Jeyadevan, H. Yamaguchi  
*Anisotropic Thermal Conductivity of Ag Nanowire Dispersed-Magnetic Fluid*
- 11:00 – 11:20 Coffee break

### Section: Theory and Computer Simulations

Chairman: *Yu. Raikher*

- 11:20 - 11:50 TCS-PL-1 (Plenary Lecture 5)  
A. Cebers  
*Active Matter and Electromagnetic Fields*
- 11:50 – 12:10 TCS-OP-1 (Oral 11)  
R. Blaak, C. N. Likos  
*Magnetically Functionalized Star-Polymers*
- 12:10 – 12:30 TCS-OP-2 (Oral 12)  
A. Attaran, J. Brummund, T. Wallmersperger  
*Modeling and Finite Element Simulation of the Magneto-Mechanical Behavior of Ferrogels*
- 12:30 – 12:50 TCS-OP-3 (Oral 13)  
 X.-D.Niu, M.-F. Chen, H. Yamaguchi  
*Investigation of Self-Assembly of Nonmagnetic Particles in Magnetized Magnetic Fluid*

12:50 – 13:10 TCS-OP-4 (Oral 14)  
S. S. Kantorovich, P. A. Sánchez, E. S. Pyanzina, J. J. Cerdà, T. Sintes  
*Polymer Crosslinked Chains of Magnetic Micro- and Nanoparticles as Building Blocks of Novel Smart Materials*

13:10 – 14:10 Lunch

14:10 – 15:30 **Poster Session 2**  
 Heat and Mass Transfer; Theory and Computer Simulations

**Section: Theory and Computer Simulations**

**Chairman: A. Cebers**

15:30 – 16:00 TCS-PL-2 (Plenary Lecture 6)  
P. J. Camp, E. A. Elfimova, A. O. Ivanov  
*Particle-Based Theories and Simulations of Ferrofluids*

16:00 – 16:20 TCS-OP-5 (Oral 15)  
A. O. Ivanov, S. S. Kantorovich, E. A. Elfimova, V. S. Zverev,  
 A. Yu. Solovyova, J. O. Sindt, P. J. Camp  
*Dynamic Initial Magnetic Susceptibility Spectra of Polydisperse Ferrofluids: the Effect of Dipolar Interaction*

16:20 – 16:50 Coffee break

**Section: Theory and Computer Simulations**

**Chairman: P. Camp**

16:50 – 17:10 TCS-OP-6 (Oral 16)  
P. V. Melenev, R. Weeber, Yu. L. Raikher, C. Holm  
*Magnetic Nanoparticles in Fluid Environment: Combining Molecular Dynamics and Lattice-Boltzmann*

17:10 – 17:30 TCS-OP-7 (Oral 17)  
I. S. Poperechny, Yu. L. Raikher, V. I. Stepanov  
*Magnetic Resonance in a Ferrofluid Based on Uniaxial Superparamagnetic Particles*

## Wednesday, 6th of July 2016

### Invited Talk

- 09:00 – 09:40 IT-3 (Invited Speaker 3)  
Yu. L. Raikher, O. V. Stolbov  
*Ferromagnet Particles in an Elastomer Harness: Mesoscopic Magnetomechanics of Polymer Composite Films*

### Section: Magnetopolymer Composites

**Chairman:** *P. Kopchansky*

- 09:40 – 10:10 MC-PL-1 (Plenary Lecture 7)  
M. T. Lopez-Lopez  
*Synthesis, Characterization and in Vivo Evaluation of Biocompatible Ferrogels*
- 10:10 – 10:30 MC-OP-1 (Oral 18)  
D. Yu. Borin, S. Odenbach  
*Magnetic Susceptibility of Magnetopolymer Elastic Composites*
- 10:30 – 10:50 MC-OP-2 (Oral 19)  
D. Chirikov, D. Yeliseyeva, A. Zubarev, D. Borin  
*Hysteresis of Magnetization of the Composites with Micronized Magnetic Particles*
- 10:50 – 11:10 MC-OP-3 (Oral 20)  
K. Kalina, P. Metsch, C. Lux, M. Kästne  
*Microscale Modeling and Simulation of Magnetorheological Elastomers at Finite Strains: a Study on the Influence of Mechanical Preloads*
- 11:10 – 11:40 Coffee break

### Section: Magnetopolymer Composites

**Chairman:** *A. Schmidt*

- 11:40 – 12:00 MC-OP-4 (Oral 21)  
 I. A. Belyaeva, V. V. Sorokin, G. V. Stepanov, D. Stadler, M. Shamonin,  
E. Yu. Kramarenko  
*Time Evolution of Dynamic Modulus of Magnetoactive Elastomers in Magnetic Fields*
- 12:00 – 12:20 MC-OP-5 (Oral 22)  
M. V. Vaganov, J. Linke, S. Odenbach, Yu. L. Raikher  
*Model FORC Diagrams for Hybrid Magnetic Elastomers*

- 12:20 – 12:40 MC-OP-6 (Oral 23)  
M. Balasoiu, V. T. Lebedev, Yu. L. Raikher, I. Bica, M. Bunoiu  
*The Implicit Effect of Texturizing Field on the Elastic Properties of Magnetic Elastomers Revealed By Sans*
- 12:40 – 13:00 MC-OP-7 (Oral 24)  
A. M. Biller, O. V. Stolbov, Yu. L. Raikher  
*Determining Large-Scale Elastic Properties of Soft Magnetic Elastomers From Mesoscopic Modelling*

13:00 – 14:00 Lunch

**Section: Structures and Rheology**  
**Chairman: J. Philip**

- 14:00 – 14:30 SR-PL-1 (Plenary Lecture 8)  
P. Kuzhir, G. Orlandi, C. Magnet, H. Ezzaier, J. Alves Marins, G. Bossis, A. Meunier, A. Zubarev  
*Separation of Magnetic Nanoparticles: from Basic Concept to Microfluidic System*
- 14:30 – 14:50 SR-OP-1 (Oral 25)  
F. Gonzalez-Caballero, L. Rodríguez-Arco, A. B. Bonhome-Espinosa, J. D. G. Duran, A. Yu. Zubarev, M. T. Lopez-Lopez  
*Ferrofluids as Carriers for the Preparation of Novel Field-Responsive Materials*
- 14:50 – 15:10 SR-OP-2 (Oral 26)  
E. Siebert, V. Dupuis, S. Neveu, S. Odenbach  
*Experimental Investigations Towards the Effects of Small Particles on the Structure Formation of Interacting Particles*
- 15:10 – 15:30 SR-OP-3 (Oral 27)  
O. N. Labkovich, A. G. Reks, V. A. Chernobai  
*The Friction Control of Magnetic Fluid in the Couette Flow*
- 15:30 – 15:50 SR-OP-4 (Oral 28)  
G. Steinbach, D. Nissen, M. Albrecht, E. V. Novak, P. A. Sanchez, S. S. Kantorovich, S. Gemming, A. Erbe  
*Colloids with Asymmetric Magnetization – Towards Flexible and Tunable Self-Assembly*
- 15:50 – 16:10 SR-OP-5 (Oral 29)  
A. M. Schmidt, M. Hermes, E. Roeben, L. Kibkalo, M. Gratz, A. Tschöpe, H. Remmer, F. Ludwig  
*Magnetic Particle Nanorheology of Complex Fluids*
- 16:10 – 22:00 **Conference Dinner**  
All the participants will be delivered to the Conference Dinner's place by buses.  
All the information will be on the Registration Desk.

## Thursday, 7th of July 2016

### Invited Talk

- 09:00 – 09:40 IT-4 (Invited Speaker 4)  
F. Sciortino  
*Competing Interactions: from Dipolar Particles to DNA Gels*

**Section: Structures and Rheology; Synthesis**  
**Chairman: M. Lopez-Lopez**

- 09:40 – 10:10 SR-PL-2 (Plenary Lecture 9)  
S. Odenbach  
*Microstructure Analysis in Magnetorheological Elastomers – and Other Magnetic Particle Based Materials*
- 10:10 – 10:30 SR-OP-6 (Oral 30)  
Y. Ido, H. Nishida, Y. Iwamoto, H. Yokoyama  
*Viscous Property of Ferrofluids Containing Both Micrometer-Size Magnetic Particles and Needle-Like Fine Particles*
- 10:30 – 10:50 SR-OP-7 (Oral 31)  
D. Zablotsky, E. Blums, H. J. Herrmann  
*Magnetorheology of a Chain Forming Ferrofluid Studied By Numerical Simulations*
- 10:50 – 11:10 SYN-OP-1 (Oral 32)  
S. Hinrichs, N. Nun, N. Lucht, B. Fischer  
*Synthesis and Characterization of Anisotropic Magnetic Hydrogels*
- 11:10 – 11:30 Coffee break

**Section: Biomedical and Technical Applications**  
**Chairman: P. Kuzhir**

- 11:30 – 12:00 BMTA-PL-1 (Plenary Lecture 10)  
S. Dutz  
*Biomedical Applications of Magnetic Nanoparticles and Ferrofluids in Diagnostics and Therapy*
- 12:00 – 12:20 BMTA-OP-1 (Oral 33)  
J. Nowak, S. Odenbach  
*A Capillary Viscometer Designed to Measure the Magnetoviscous Effect of Biocompatible Ferrofluids Diluted in Sheep Blood*
- 12:20 – 12:40 BMTA-OP-2 (Oral 34)  
M. V. Avdeev, V. I. Petrenko, L. A. Bulavin, L. Balejčíková, P. Kopcansky  
*The Impact of Magnetic Nanoparticles on the Structural Stability of Bio-Macromolecules in Complex Fluids*

- 12:40 – 13:00 BMTA-OP-3 (Oral 35)  
T. I. Volkova, V. Böhm, T. Kaufhold, J. Popp, F. Becker, D. Borin,  
G. V. Stepanov, K. Zimmermann  
*Motion Behaviour of Magneto-Sensitive Elastomers Controlled By An  
External Magnetic Field for Sensor Applications*
- 13:00 – 14:00 Lunch
- 14:00 – 15:30 **Poster Session 3**  
Structures and Rheology; Biomedical and Technical Applications; Synthesis
- Section: Biomedical and Technical Applications**  
**Chairman: A. Zubarev**
- 15:30 – 15:50 BMTA-OP-4 (Oral 36)  
M. Molcan, M. Timko, V. I. Petrenko, M. V. Avdeev, O. I. Ivankov,  
V. M. Garamus, P. A. Skumiel, M. Kubovcikova, K. Paulovicova,  
P. Kopcansky  
*Structure and Hyperthermia Characterization of the Magnetosomes Solutions*
- 15:50 – 16:10 BMTA-OP-5 (Oral 37)  
R. Müller, M. Zhou, A. Dellith, T. Liebert, T. Heinze  
*Meltable Magnetic Biocomposites for Controlled Release*
- 16:10 – 16:40 Coffee break
- 17:00 – 20:00 **Excursion**  
All the information will be on the Registration Desk.

## Friday, 8th of July 2016

### Invited Talk

09:00 – 09:40 IT-5 (Invited Speaker 5)  
A. P. Philipse  
*Shape-Sensitive Dipolar Structure Formation in Magnetic Cube Fluids*

**Section: Biomedical and Technical Applications**  
**Chairman: H. Yamaguchi**

09:40 – 10:10 BMTA-PL-2 (Plenary Lecture 11)  
M. S. Krakov, I. V. Nikiforov  
*Magnetic Fluid Seal and Effect Soret*

10:10 – 10:30 BMTA-OP-6 (Oral 38)  
G. R. Iglesias, A. V. Delgado, F. Gonzalez-Caballero, M. M. Ramos-Tejada  
*Applications of Magnetic Nanoparticles in Hyperthermia and Drug Release*

10:30 – 11:00 Coffee break

**Section: Biomedical and Technical Applications**  
**Chairman: A. Ivanov**

11:00 – 11:20 BMTA-OP-7 (Oral 39)  
N. Parikh, K. Parekh  
*Development of Magnetic Fluid for the Treatment of Alzheimer's Disease*

11:20 – 11:40 BMTA-OP-8 (Oral 40)  
I. Slabu, A. Röth, G. Güntherodt, M. Baumann, T. Schmitz-Rode  
*Magnetic Targeting of Ferrofluids Under Liquid Stream Conditions for Tumor Therapy: Simulation and Experimental Investigations*

11:40 – 12:00 BMTA-OP-9 (Oral 41)  
C. Thebault, E. Cazares-Cortes, A. Seth, J. -M. Siaugue, N. Griffete,  
C. Ménager  
*Magnetic Hybrid Systems for Health*

12:00 – 12:30 **Closing**

12:30 – 14:00 Lunch



## Poster Session 1

### Monday, 4th of July 2016, 14:00 – 15:30

#### Section: Physical Properties

- PP-PS1-1 V. A. Popov, V. G. Gilev, A. N. Zakhlevnykh  
*Experimental Investigation of the Freedericksz Transition in Liquid-Crystalline Ferromagnetic Suspensions*
- PP-PS1-2 A. Kumar, M. Arora, M. S. Yadav, R. P. Pant  
*Finite Size Effect on  $Mg^{2+}$  Ions Doped  $Mg_xZn_{1-x}Fe_2O_4$  ( $0.1 \leq x \leq 0.5$ ) Ferrite Nanoparticles*
- PP-PS1-3 S. Sudo, K. Yamamoto, Y. Ishimoto, S. Nix  
*Water Flow Patterns Induced by Bridge Oscillation of Magnetic Fluid between Two Permanent Magnets Subject to Alternating Magnetic Field*
- PP-PS1-4 J. Patel, K. Parekh, R. V. Upadhyay  
*Influence of Field Induced Microstructure Evolution on Thermal Conductivity in a Transformer Oil Based Mn-Zn Magnetic Nanofluid*
- PP-PS1-5 E. A. Elfimova, A. O. Ivanov, L. B. Popescu, V. Socoliuc  
*Transverse Magneto-Optical Anisotropy in Bidisperse Ferrofluids with Long Range Particle Correlations*
- PP-PS1-6 V. I. Petrenko, L. A. Bulavin, L. Almasy, V. M. Garamus, P. Kopcansky, M. V. Avdeev  
*Structural Aspects of Magnetic Fluids Stabilization: Small-Angle Scattering Data*
- PP-PS1-7 C. V. Yerin  
*Particles Size Distribution In Diluted Magnetic Fluids*
- PP-PS1-8 V. Gdovinova, N. Tomasovicova, V. Zavisova, N. Eber, T. Toth-Katona, J. Jadzyn, P. Kopcansky  
*Macroscopic Dielectric Effect in Ferronematics*
- PP-PS1-9 K. May, I. Appel, S. Behrens, A. Eremin, R. Stannarius  
*Magneto-optical Properties of Colloidal Mixtures of Anisometric non-magnetic Pigment Particles and Isometric Magnetic Nanoparticles*
- PP-PS1-10 A. M. Storozhenko, A. O. Tantsyura, I. A. Shabanova  
*Measurement of the Torque on Ferrofluid Samples in Rotating Magnetic Fields*
- PP-PS1-11 E. K. Nepomnyashchaya, A. V. Prokofiev, E. N. Velichko, I. V. Pleshakov, Yu. I. Kuzmin  
*Investigation of Magneto-Optical Properties of Ferrofluids By Laser Light Scattering Techniques*

- PP-PS1-12 B. V. Rao, A. D. P. Rao  
*Influence of  $Mo^{6+}$  on Magnetic and Micro-Structural Properties of Copper Ferrite*
- PP-PS1-13 B. V. Rao, P. V. L. Narayana, A. D. P. Rao  
*Impact of  $Mo^{6+}$  on Resistivity of Copper Ferrite*
- PP-PS1-14 G. B. Praveen, A. D. P. Rao  
*Development and Study of Mg-Mn New Ferrite Materials with Sm/Zr Substitution*
- PP-PS1-15 C. Rigoni, M. Pierno, G. Mistura, A. Abou-Hassan  
*Static Magnetowetting of Ferrofluidic Drops*
- PP-PS1-16 I. M. Arefyev, O. V. Demidenko, M. S. Saikin  
*Stability Assessment of Magnetic Fluid in a Single-tooth Magnetic Fluid Sealer*
- PP-PS1-17 O. Marinica, D. Vizman, V. Socoliuc  
*The Influence of Demagnetizing Field Correction on the Analysis of Ferrofluid Static Magnetization Data*
- PP-PS1-18 V. N. Duginov, D. S. Andrievskii, M. Balasoii, K. I. Gritsaj, A. L. Getalov, E. N. Komarov, S. A. Kotov, T. N. Mamedov, A. E. Moroslip, V. G. Scherbakov, S. I. Vorob'ev, D. Fluerasu, C. Stan  
*Study of the Systems with Cobalt Ferrite Nanoparticles Using Polarized Muons*
- PP-PS1-19 V. I. Stepanov  
*Dynamics of Magnetic Nanoparticles Under Rotating Field with Allowance for the Néel and Brown Relaxation Mechanisms*
- PP-PS1-20 V. M. Polunin, P. A. Ryapolov, V. B. Platonov  
*Mechanics of the Magnetic Fluid Column in the Strong Magnetic Fields*
- PP-PS1-21 M. V. Ushakov, M. I. Oshtrakh, I. Felner, A. S. Semenova, D. G. Kellerman, V. Šepelák, V. A. Semionkin, P. C. Morais  
*Magnetic Properties of Iron Oxide-Based Nanoparticles: Study Using Mössbauer Spectroscopy with a High Velocity Resolution and Magnetization Measurements*
- PP-PS1-22 M. V. Avdeev, V. I. Petrenko, I. V. Gapon, L. A. Bulavin, O. Soltwedel, V. Zavisova, M. Kubovcikova, P. Kopcansky  
*On the Adsorption of Magnetic Nanoparticles on Oxidized Silicon from Aqueous Ferrofluids*
- PP-PS1-23 D. Schmidt, D. Eberbeck, U. Steinhoff  
*Finding the Magnetic Size Distribution of Magnetic Nanoparticles From Magnetization Measurements Via the Iterative Kaczmarz Algorithm*
- PP-PS1-24 Yu. Dikansky, A. Ispiryan, S. Kunikin, A. Radionov, M. Evtushenko  
*Temperature Dependence of Magnetic Susceptibility of Ferrofluids with Different Particles Size*

**Section: Magnetopolymer Composites**

- MC-PS1-1 T. S. Soliman, E. V. Rusinova, S. A. Vshivkov  
*Effect of a Magnetic Field on the Structure and Rheological Properties of Cellulose Ether Solutions*
- MC-PS1-2 A. Shankar, A. P. Safronov, E. A. Mikhnevich, I. V. Beketov  
*Surface Modified Fe and Ni Nanoparticles for the Preparation of Ferrogels*
- MC-PS1-3 D. I. Merkulov, V. A. Naletova, D. A. Pelevina, V. A. Turkov  
*Multi-stability of a Body with Magnetizable Elastomer in a Non-Uniform Magnetic Field*
- MC-PS1-4 A. V. Ryzhkov, Yu. L. Raikher  
*Structural Changes in Microferrogels Cross-Linked By Magnetically Anisotropic Particles*
- MC-PS1-5 D. Yu. Borin, N. Kolsch, G. V. Stepanov, S. Odenbach  
*Torsion Test of Magnetorheological Elastomers*
- MC-PS1-6 O. V. Stolbov, Yu. L. Raikher  
*Mesosopic Modelling of Soft Magnetic Elastomers*
- MC-PS1-7 M. U. Witt, S. Backes, B. Fischer, E. Roeben, M. Hermes, A. M. Schmidt, R. v. Klitzing  
*Multifunctional Magnetic Hydrogel Microparticles*
- MC-PS1-8 G. V. Stepanov, D. Yu. Borin, P. A. Storozhenko  
*Rotation of Magnetic Particles Inside the Polymer Matrix of Magnetoactive Elastomers with Hard Magnetic Filler*
- MC-PS1-9 T. A. Nadzharyan, L. A. Makarova, Yu. A. Alekhina, T. S. Rusakova, G. V. Stepanov, N. S. Perov, E. Yu. Kramarenko  
*Interaction of Magnetoactive Elastomers with Various Systems of Permanent Magnets*

**Poster Session 2**  
**Tuesday, 5th of July 2016, 14:00 – 15:30**

**Section: Heat and Mass Transfer**

- HMT-PS2-1 O. N. Labkovich, S. G. Pohirnitskaya  
*Hydrodynamic Stability of Couette Flow of the Magnetic Fluid*
- HMT-PS2-2 A. S. Ivanov, A. F. Pshenichnikov, E. A. Polezhaeva  
*Isothermal Convective Flows in Magnetic Fluids Undergoing First-Order Phase Transition*
- HMT-PS2-3 A. Kumar, M. Arora, R. P. Pant  
*Gd<sup>3+</sup> Ions Doped Mn-Zn Ferrofluid for Heat Transfer Application*
- HMT-PS2-4 A. Motsar, V. Bashtovoi, A. Reks  
*Energy Dissipation in a Finite Volume of Magnetic Fluid*
- HMT-PS2-5 P. V. Krauzin, A. A. Bozhko, M. T. Krauzina, S. A. Suslov  
*The Use of Ferrofluids for Heat Removal: Advantage Or Disadvantage?*
- HMT-PS2-6 V. V. Korolev, A. G. Ramazanova, O. V. Balmasova, D. V. Korolev  
*Regularities of Change of Magnetocaloric Properties in Magnetic Liquids*

**Section: Theory and Computer Simulations**

- TCS-PS2-1 M. S. Lubnin, A. N. Zakhlevnykh  
*A Simple Model of Liquid-Crystalline Magnetic Suspension of Anisometric Particles*
- TCS-PS2-2 K. V. Kuznetsova, A. N. Zakhlevnykh  
*Magnetic Field Induced Unwinding of Helical Structure in Compensated Ferrocholesterics*
- TCS-PS2-3 D. A. Petrov, A. N. Zakhlevnykh  
*The Effect of Bistable Coupling on Orientational Phase Transition in Ferronematics*
- TCS-PS2-4 D. A. Pelevina, V. A. Naletova, V. A. Turkov  
*Magnetic Fluid Bridge in a Non-Uniform Magnetic Field*
- TCS-PS2-5 M. Li, G. Li, S. Li  
*Elliptical Characteristic Analysis for Motion Stability Equations of Magnetic Fluid*
- TCS-PS2-6 G. Li, M. Li  
*Numerical Simulation of Ferrofluid Droplets Using Moment of Fluid Method*
- TCS-PS2-7 V. A. Filippov, Yu. I. Stradomsky  
*Mathematical Model of Non-Magnetic Particles Motion in the Gap of Hydrostatic Magnetic Fluid Separator*

- TCS-PS2-8 E. Novak, D. Rozhkov, E. Minina, P. Sánchez, S. Kantorovich  
*Effective Modeling of Designed Supramolecular Magnetic Filaments of Different Shapes*
- TCS-PS2-9 A. S. Vinogradova, V. A. Turkov, V. A. Naletova  
*Magnetic Fluid Axisymmetric Volume on a Horizontal Plane near a Vertical Line Conductor in Case of Non-Wetting*
- TCS-PS2-10 D. Y. Lagutkina, M. S. Saykin  
*The Development and Research of the Magnetic Fluid Sensor Angle with the Mobile Sensitive Element with Permanent Magnets*
- TCS-PS2-11 H. Yamasaki, H. Yamaguchi  
*Numerical Simulation of Bubble Deformation in Magnetic Fluids by Finite Volume Method*
- TCS-PS2-12 O. V. Zubareva, N. M. Zubarev  
*Deformation of the Free Surface of a Conducting Fluid in the Magnetic Field of Current-Carrying Linear Conductors*
- TCS-PS2-13 N. M. Zubarev, O. V. Zubareva  
*Formation of Rupture in a Conducting Fluid Layer under the Action of the Oscillating Tangential Magnetic Field*
- TCS-PS2-14 K. E. Bobrov, N. M. Zubarev, O. V. Zubareva  
*Criteria for Hard Excitation of Free Surface Instability of a Fluid Subjected To the Normal Magnetic (Electric) Field in Confined Axisymmetric Geometry*
- TCS-PS2-15 E. Pyanzina, A. Dobroserdova, S. Kantorovich  
*Internal Structure of Magnetic Anisotropic Nanoparticle Systems: Influence of Concentration and Particles Structure*
- TCS-PS2-16 E. A. Kochurin, N. M. Zubarev  
*Nonlinear Dynamics of Interface between Dielectric (Ferromagnetic) Fluids Under the Action of Tangential Velocity Discontinuity and Horizontal Electric (Magnetic) Field*
- TCS-PS2-17 Yo Mizuta  
*Dynamic Analysis on Magnetic Fluid Interface Validated by Conservation Laws*
- TCS-PS2-18 A. A. Kuznetsov, A. F. Pshenichnikov  
*Effect of Container Shape on Orientational Ordering in Dipolar Hard Sphere Fluid*
- TCS-PS2-19 E. Minina, S. Kantorovich  
*Pressure and Compressibility Factor of Bidisperse Magnetic Fluids*
- TCS-PS2-20 E. Novak, A. Gudkova, E. Pyanzina  
*Influence of an External Magnetic Field on Ferrofluids with Chains*
- TCS-PS2-21 M. Habera, J. Hron  
*Modelling of a Free-Surface Ferrofluid Flow*

- TCS-PS2-22 E. Novak, P. Sánchez, S. Kantorovich  
*Colloids with Magnetic Caps under an External Magnetic Field*
- TCS-PS2-23 I. M. Subbotin  
*Mathematical Modeling of Inverse Ferrofluid Emulsion: Weak-Field Limit*
- TCS-PS2-24 M. Sega, I. Subbotin, S. Kantorovich, A. Ivanov  
*Ferrofluid Droplet: Simulation Approaches to Study Field-Induced Deformation*
- TCS-PS2-25 S. S. Kantorovich, A. O. Ivanov, L. Rovigatti, J. M. Tavares, F. Sciortino  
*Nonmonotonic Magnetic Susceptibility of Dipolar Hard-Spheres at Low Temperature and Density*
- TCS-PS2-26 A. B. Dobroserdova, S. S. Kantorovich  
*The Study of Self-Diffusion Coefficients in Magnetic Fluids Using Molecular Dynamics Simulations*
- TCS-PS2-27 Yu. E. Nechoroshkova, V. S. Zverev, E. A. Elfimova  
*The Influence of Uniform External Magnetic Field on the Magnetic Susceptibility Spectra of the Ferrofluids*
- TCS-PS2-28 E. D. Vtulkina, E. A. Elfimova  
*Thermodynamic and Magnetic Properties of Ferrofluids in External Uniform Magnetic Field*
- TCS-PS2-29 M. Fabian, P. Burda, M. Šviková, R. Huňady  
*The Influence of Magnetic Field on the Separation of Droplets From Ferrofluid Jet*
- TCS-PS2-30 A. Bushuev, V. Zverev  
*Numerical Study of Dynamic Response Interacting Ferroparticles in Magnetic Fluids Under Strong Field*
- TCS-PS2-31 A. Yu. Solovyova  
*The Effect of Polydispersity on the Thermodynamic and Magnetic Properties of Ferrofluids*
- TCS-PS2-32 O. A. Goldina, A. Yu. Solovyova, E. I. Paramonov, E. A. Elfimova, A. O. Ivanov, A. V. Lebedev  
*Static Initial Magnetic Susceptibility of Polydisperse Ferrofluids*
- TCS-PS2-33 A. V. Ambarov, T. M. Batrudinov, V. S. Zverev, A. O. Ivanov, E. A. Elfimova  
*Numerically and Theoretically Determining the Dynamic Magnetic Response of Ferrofluid to Static and Alternating Magnetic Fields*
- TCS-PS2-34 J. G. Donaldson, E. S. Pyanzina, S. S. Kantorovich  
*The Initial Magnetic Susceptibility of Colloidal Cube-Like Particles in Low-Density Suspensions*
- TCS-PS2-35 D. Kvasov, V. Naletova, E. Beketova, Yu. Dikanskii  
*Magnetic Fluid Droplet in a Harmonic Electric Field*

**Poster Session 3**  
**Thursday, 7th of July 2016, 14:00 – 15:30**

**Section: Structures and Rheology**

- SR-PS3-1     J. M. Linke, S. Odenbach  
*Experimental Studies on the Anisotropy of the Magnetoviscous Effect in Ferrofluids*
- SR-PS3-2     M. Ronti, A. O. Ivanov, L. Rovigatti, F. Sciortino, S. S. Kantorovich  
*Low-Temperature Behavior of the Dipolar Hard Sphere Fluid*
- SR-PS3-3     A. R. Zakinyan, Yu. I. Dikansky  
*Effect of Microdrops Deformation on Electrical and Rheological Properties of Magnetic Fluid Emulsion*
- SR-PS3-4     M. Rajnak, M. Timko, P. Kopcansky, K. Paulovicova, J. Tothova, J. Kurimsky, B. Dolnik, M. V. Avdeev, V. I. Petrenko, A. Feoktystov  
*Structure and Rheology of Transformer Oil-Based Ferrofluid under External Electric Fields*
- SR-PS3-5     I. M. Arefyev, T. A. Arefyeva  
*Rheological Research of Kerosene-based Magnetic Fluid*
- SR-PS3-6     C. A. Bushueva, K. G. Kostarev, A. I. Shmyrova  
*Ferrofluid Drop on a Liquid Substrate in the Uniform Magnetic Field*
- SR-PS3-7     J. M. Linke, A. B. Dobroserdova, S. S. Kantorovich, S. Odenbach  
*First-Order Reversal Curve Studies of Magnetoactive Elastomers*
- SR-PS3-8     S. Webers, J. Landers, S. Salamon, H. Remmer, F. Ludwig, H. Wende  
*Simultaneous Study of Brownian Motion and Néel Relaxation in Ferrofluids By Mössbauer Spectroscopy*
- SR-PS3-9     A. Motsar, A. Storozhenko, I. Shabanova  
*Deformation Processes of Magnetic Fluid Drop with Compound Magnetic Core*
- SR-PS3-10    E. Dohmen, N. Modler  
*Anisotropic Characterization of Magnetorheological Materials*
- SR-PS3-11    M. Chand, Annveer, R. P. Pant  
*Rheological Investigations on Cnt-Ferrofluid Nanocomposites*
- SR-PS3-12    A. B. Bonhome-Espinosa, M. T. Lopez-Lopez, F. Gonzalez-Caballero, J. D. G. Duran, F. Campos, V. Carriel, I. A. Rodriguez, A. Zubarev  
*Rheological Properties of Magnetic Hydrogels*
- SR-PS3-13    Decai Li, Siyu Chen  
*The Study on the Resisting Torque of the Ferrofluid Seal*

SR-PS3-14 C. Pai, Vijaykumar B. Varma, R. Srinivasan, R. Nagarajan, R. V. Ramanujan  
*Forward Laser Scattering Studies with Aqueous Magnetic Fluids*

### Section: Biomedical and Technical Applications

BMTA-PS3-1 V. P. Mikhailov, A. M. Bazinenkov  
*Active Vibration Isolation Platform on Base of Magnetorheological Elastomers*

BMTA-PS3-2 C. Gräfe, A. Weidner, M. v.d. Lühe, C. Bergemann, J. H. Clement, F. H. Schacher, S. Dutz  
*A Protein Corona on Magnetic Nanoparticles Affects Nanoparticle-Cell Interactions*

BMTA-PS3-3 K. Kaczmarek, A. Józefczak, Z. Rozynek, T. Hornowski, M. Kubovčíková  
*Effect of Magnetic Nanoparticles on the Acoustic Properties of Tissue-Mimicking Agar-Gel Phantoms*

BMTA-PS3-4 Yu. B. Kazakov, N. A. Morozov, S. A. Nesterov  
*Development of Models of the Magnetorheological Fluid Damper*

BMTA-PS3-5 T. I. Volkova, V. Böhm, V. A. Naletova, T. Kaufhold, R. Becker, K. Zimmermann  
*A Ferrofluid Based Artificial Tactile Sensor with Magnetic Field Control*

BMTA-PS3-6 Y. Mitamura, C. Durst  
*Miniature Magnetic Fluid Seal Working in Liquid Environments*

BMTA-PS3-7 D. Buteica, I. Borbath, I. V. Nicolae, R. Turcu, O. Marinica, V. Socoliuc  
*Paper with Embedded Multicore-Shell  $Fe_3O_4$ - $SiO_2$  Magnetic Nanocomposites for Security Applications*

BMTA-PS3-8 R. Friedrich, J. Zaloga, E. Schreiber, I. Y. Tóth, E. Tombácz, L. Trahms, J. Nowak, S. Odenbach, S. Lyer, C. Alexiou  
*Spions Functionalized with Thrombolytic Tpa for Directed Targeting of Fibrin-Based Biological Matrices*

BMTA-PS3-9 C. Janko, S. Lyer, M. Poettler, R. P. Friedrich, M. Distaso, J. Nowak, C. Alexiou  
*Combination of Innovative Methods Enabling Interference-Free Evaluation of Iron Oxide Nanoparticle Biocompatibility*

BMTA-PS3-10 A. S. Drozdov, V. V. Vinogradov  
*Two-Component Biocompatible Magnetic Fluid For Biomedical Application*

BMTA-PS3-11 A. F. Abu-Bakr, A. Zubarev  
*Magnetic Hyperthermia in Solid Ferromagnetic Colloids. Effect of Interparticle Interaction*

BMTA-PS3-12 H. Nakagawa, M. Ohuchi  
*Artificial Blood-Flow Controlling Effects of Inhomogeneity of Twisted Magnetic Fields*



BMTA-PS3-13 H. Nakagawa, M. Ohuchi  
*A Magnetohydrodynamic Study for Magnetic Therapy*

BMTA-PS3-14 Y. Ido, K. Tomiyama  
*Magnetic Foaming of Polyurethane Foam*

### Section: Synthesis

SYN-PS3-1 A. B. Bonhome-Espinosa, L. Rodriguez-Arco, M. T. Lopez-Lopez,  
J. D. G. Duran, F. Gonzalez-Caballero  
*Ellipsoidal Magnetite-Covered Silica Nanoparticles Functionalized with a Biocompatible Polymer*

SYN-PS3-2 S. Dutz, N. Buske, J. H. Clement, C. Gräfe  
*Co-Doped Magnetite Nanoparticles with Tunable Magnetic Heating Power*

SYN-PS3-3 D. Kim, J. Ahn, D. Shin, S. Hong, C. Choi  
*Fabrication Technology for Permanent Magnetic Materials: Nd-Fe-B Particles By Reduction-Diffusion Process*

SYN-PS3-4 N. Buske, S. Dutz  
*The Colloidal Stability of Water Based Dispersions with Modified Large Single Domain Magnetite Particles*

SYN-PS3-5 Zhang Zhi-li, Xu Long-fei, Zhang Hai-ming, Yang Yang, Li De-cai  
*Preparation and Characterization of Magnetic Nano-  $Fe_3O_4@SiO_2$  Composite Particles*

# For notes

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