

ICMF12 Conference Program

Sunday, 1st August, 2010			
16:00 – 18:00		Registration	
18:00 – 20:00		Welcome Party (Faculty Club at 1 st floor in Tohoku university centennial hall)	

Monday, 2nd August, 2010			
8:30 – 9:00		Registration	
9:00 – 9:45		Opening Ceremony – Welcome to ICMF12	
9:45 – 10:35	PL1	Plenary Lecture 1 (Open to Public) Chairman: Prof. S. Kamiyama	<i>Japan</i>
		“Development and applications of bulk glassy alloys” Prof. A. Inoue	
10:35 – 11:00		Tea Break	
11:00 – 12:30	OS1	Oral Session 1 : Synthesis, Structure and Properties of Nanoparticles Chairman: Prof. K. Nakatsuka, Prof. L. Vekas	
11:00 – 11:15	OS1-1109	“Movement of liquid gallium dispersing low concentration of temperature sensitive magnetic particles under magnetic field”	<i>Japan</i>
		T. Fujita, H. S. Park, K. Ono, S. Matsuo, G. Dodbiba	
11:15 – 11:30	OS1-1002	“Magnetic fluids stabilized by polypropyleneglycol”	<i>Russia</i>
		A. V. Lebedev, S. N. Lysenko	

11:30 – 11:45	OS1-1070	“XANES and EXAFS investigations of core-shell ZnFe ₂ O ₄ nanoparticles of ferrofluids”	<i>Brazil</i>
		J. A. Gomes, G. M. Azevedo, J. Depeyrot, J. Mestnik-Filho, G. J. da Silva, F. A. Tourinho, R. Perzynski	
11:45 – 12:00	OS1-1019	“Study of magnetite nanoparticles embedded in a lyotropic liquid crystal”	<i>Brazil</i>
		F. R. Arantes, A. M. F. Neto, D. R. Cornejo	
12:00 – 12:15	OS1-1192	“Ferrofluid emulsions: a key to produce ultra-dilute magnetic fluids”	<i>India</i>
		N. Andhariya, B. Chudasama, R.V. Upadhyay, R.V. Mehta	
12:15 – 12:30	OS1-1160	“Gd ³⁺ Substituted MnZn ferrites for ferrofluids application”	<i>India</i>
		M. Arora, A. Kumar, R. P. Pant	
12:30 – 14:00		Lunch	
14:00 – 15:30	OS2	Oral Session 2 : Heat and Mass Transfer Chairman: Prof. E. Blums, Prof. H. Yamaguchi	
14:00 – 14:15	OS2-1062	“Non-isothermal mass transfer of ferrocolloids through porous membrane”	<i>Latvia</i>
		E. Blums, G. Kronkalns, A. Mezulis, V. Sints	
14:15 – 14:30	OS2-1193	“Numerical investigation of optically induced microconvection in thin ferrofluid layers”	<i>Latvia</i>
		D. Zablotsky, E. Blums	
14:30 – 14:45	OS2-1210	“Thermal conductivity tensor of magnetite magnetic fluids in a uniform magnetic field”	<i>Korea</i>
		Y. J. Suh, Y. M. Heo, D. S. Kil	

14:45 – 15:00	OS2-1233	“Utilization of the magnetogrulometric analysis to estimate the thermal conductivity of magnetic fluids”	<i>Romania</i>
		S. Holotescu, F. Stoian, O. Marinica, L. Kubicar, P. Kopcansky, M. Timko	
15:00 – 15:15	OS2-1094	“Interaction of gravitational and magnetic mechanisms of convection in a vertical layer of a magnetic fluid”	<i>Australia</i>
		S. A. Suslov, A. A. Bozhko, G. F. Putin, A. S. Sidorov	
15:15 – 15:30	OS2-1101	“Thermomagnetic convection in magnetic fluids subjected to spatially modulated magnetic fields”	<i>Germany</i>
		A. Lange, S. Odenbach	
15:30 – 15:55		Tea Break	
15:55 – 17:10	OS3	Oral Session 3 : Technical Application Chairman: Prof. N. Umehara, Prof. C-Y. Hong	
15:55 – 16:10	OS3-1181	“The use of a linear Halbach array combined with a step-SPLITT channel for continuous sorting of magnetic species”	<i>France</i>
		M. Hoyos, L. Moore, P. S. Williams, M. Zborowski	
16:10 – 16:25	OS3-1175	“Magnetically-driven heat transport device using thermal sensitive magnetic fluid”	<i>Japan</i>
		Y. Iwamoto, H. Yamaguchi, X. D. Niu	
16:25 – 16:40	OS3-1110	“Design and theoretical analysis of micropump using magnetic fluid”	<i>China</i>
		L. Tongngang, H. Youfu, W. Jian, L. Shujin	

16:40 – 16:55	OS3-1003	“A magnetic fluid seal for rotary blood pumps: Long-term performance in liquid”	<i>Japan</i>
		Y. Mitamura, S. Takahashi, S. Amari, E. Okamoto, S. Murabayashi, I.Nishimura	
16:55 – 17:10	OS3-1174	“Resistance force of a shock absorber using magnetic functional fluids containing both micrometer-sized and nanometer-sized magnetic particles”	<i>Japan</i>
		K. Hayashi, T. Yamada, Y. Ido	
17:10 – 18:40	PS1	Poster Session 1	

Tuesday, 3rd August, 2010			
9:00 – 9:45	OS4	Oral Session 4 : Free Surface Phenomena Chairman: Prof. Y. Mizuta, Prof. A. Cebers	
9:00 – 9:15	OS4-1084	“The growth of localized states on the surface of magnetic fluids”	<i>Germany</i>
		H. Knieling, I. Rehberg, R. Richter	
9:15 – 9:30	OS4-1004	“Water entry of magnet-magnetic fluid composition”	<i>Japan</i>
		S. Sudo, H. Takayanagi, S. Kamiyama	
9:30 – 9:45	OS4-1167	“Stability analysis on the free surface phenomena of a magnetic fluid by an interface magnetic field analysis for general use”	<i>Japan</i>
		Y. Mizuta	

9:45 – 10:35	PL2	Plenary Lecture 2 (Open to Public) Chairman : Prof. K. Nakatsuka	
		“Semiconductor industry for 21 st century” Prof. T. Ohmi	<i>Japan</i>
10:35 – 11:00		Tea Break	
11:00 – 11:45	OS5	Oral Session 5 : Design and Preparation of Magnetic Colloids Chairman: Prof. R. Perzynski, Prof. I. Nakatani	
11:00 – 11:15	OS5-1223	“Tonic magnetic fluid based on cobalt ferrite nanoparticles: influence of the hydrothermal treatment on the nanoparticles size” V. Cabuil, V. Dupuis, S. Neveu	<i>France</i>
11:15 – 11:30	OS5-1140	“Investigations on magnetic particles prepared by cyclic growth” R. Müller, S. Dutz, T. Habisreuther, M. Zeisberger	<i>Germany</i>
11:30 – 11:45	OS5-1069	“Dielectric spectroscopy of liquid crystal doped with Fe ₃ O ₄ nanoparticles” P. Kopčansky, A. Koval’chuk, O. Gornitska, V. Vovk, T. Koval’chuk, N. Tomasovicova, M. Koneracka, M. Timko, V. Zavisova, J. Jadzyn, N. Eber, I. Studenyak	<i>Slovakia</i>
11:45 – 13:15		Lunch and ICMF12 Conference Photograph	
13:15 – 14:05	PL3	Plenary Lecture 3 (Open to Public) Chairman : Prof. N. Umehara	
		“Trend of cancer hyperthermia using magnetic nanoparticles” Prof. T. Kobayashi	<i>Japan</i>

14:05 – 15:20	OS6	Oral Session 6 : Complex Magnetic Fluids and Soft Magnetic Matter Chairman: Prof. S. Odenbach, Prof. H. Nishiyama	
14:05 – 14:20	OS6-1044	“Mechanism of chain formation in nanofluid based MR fluids” R. Patel	<i>India</i>
14:20 – 14:35	OS6-1212	“Morphology of cobalt ferrite nanoparticle-polyelectrolyte multilayered nanocomposites” G. B. Alcantara, M. A. G. Soler, L. G. Paterno, F. J. Fonseca, E. C. D. Lima, P. C. Morais	<i>Brazil</i>
14:35 – 14:50	OS6-1156	“Weakly anisotropic and string fluid phases in magnetorheological systems” P. Brandt, A. V. Ivlev, G. E. Morfill	<i>Germany</i>
14:50 – 15:05	OS6-1074	“Optical anisotropy of magnetosome –doped polymer films” A. Dzarova, F. Royer, D. Jamon, M. Timko, P. Kopčansky, F. Choueikani, H. Gojzewski, J. J. Rousseau	<i>Slovakia</i>
15:05 – 15:20	OS6-1040	“Three dimensional dynamics of ferromagnetic swimmer” K. Erglis, R. Livanovics, A. Cebers	<i>Latvia</i>
15:20 – 15:40		Tea Break	
15:40 – 17:25	OS7	Oral Session 7 : Biomedical Applications Chairman: Prof. J. C. Bacri, Prof. Y. Mitamura	
15:40 – 15:55	OS7-1125	“Biocompatible magnetic fluid stabilized with poly(ethylene glycol)” V. Zavišova, M. Koneracka, M. Mučkova, J. Lazova, G. Lancz, N. Tomašovičova, M. Timko, M. Fabian, A. V. Feoktystov, V. M. Garamus, M. V. Avdeev, P. Kopčansky	<i>Slovakia</i>

15:55 – 16:10	OS7-1133	“The role of the coating and aggregation state in the interactions between iron oxide nanoparticles and 3T3 fibroblasts” M. Safi, J.-F. Berret	<i>France</i>
16:10 – 16:25	OS7-1080	“Magnetic characterization of surface-coated magnetic nanoparticles for biomedical application” A. Tomitaka, H. Kobayashi, T. Yamada, Y. Takemura	<i>Japan</i>
16:25 – 16:40	OS7-1099	“Magnetic fluid – a novel approach to treat amyloid – related diseases” A. Antosova, K. Siposova, M. Koneracka, V. Zavisova, Z. Daxnerova, I. Vavra, D. Fedunova, J. Bagelova, P. Kopcansky, Z. Gazova	<i>Slovakia</i>
16:40 – 16:55	OS7-1165	“Optimal design of nanomagnets for targeted hyperthermia” H. Mamiya, B. Jeyadevan	<i>Japan</i>
16:55 – 17:10	OS7-1064	“SR μ CT and MRX analyses of ferrofluid accumulation in bovine arteries: a step further in the understanding of magnetic drug targeting” H. Rahn, S. Lyer, R. Tietze, H. Richter, Ch. Alexiou, D. Eberbeck, F. Wiekhorst, L. Trahms, F. Beckmann, S. Odenbach	<i>Germany</i>
17:10 – 17:25	OS7-1098	“Cancer therapy with drug loaded magnetic nanoparticles – Magnetic drug targeting” C. Alexiou, R. Tietze, E. Schreiber, R. Jurgons, L. Trahms, S. Lyer	<i>Germany</i>
17:25 – 18:25	PS2	Poster Session 2	

18:30 – 20:30		Conference Banquet (Sendai International Center) and ICMF12 Conference Photograph	
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Wednesday, 4th August, 2010			
9:15 – 9:45	OS8-1	Oral Session 8-1 : Physics of Magnetic Fluids Chairman: Prof. P.C.Fannin, Prof. S. Sudo	
9:15 – 9:30	OS8-1079	“Antiferromagnetic ordering in magnetic ionic liquid: emim[FeCl ₄]” I. de Pedro, D.P. Rojas, J. Albo, P. Luis, A. Irabien, J. Rodríguez Fernández	<i>Spain</i>
9:30 – 9:45	OS8-1047	“Near -electrode electro-optical effects in magnetic colloids” C. V. Yerin	<i>Russia</i>
9:45 – 10:35	PL4	Plenary Lecture 4 (Open to Public) Chairman : Prof. R. Perzynski “Proteins in cell membranes” Prof. Jean-Francois Joanny	
			<i>France</i>
10:35 – 11:00		Tea Break	
11:00 – 12:00	OS8-2	Oral Session 8-2 : Physics of Magnetic Fluids Chairman: Prof. H. Mamiya, Prof. R. V. Upadhyay	
11:00 – 11:15	OS8-1052	“The resonance decay function method in the determination of the pre-factor of the Néel relaxation time of single-domain nanoparticles” P. C. Fannin, C. N. Marin, C. Couper	<i>Ireland</i>

11:15 – 11:30	OS8-1146	“Ferrofluid with clustered iron nanoparticles: slow relaxation of rheological properties under joint action of shear flow and magnetic field” D. Borin, R. Muller, S. Odenbach	<i>Germany</i>
11:30 – 11:45	OS8-1067	“Pattern formation at magnetophoretal motion in the self-magnetic field of magnetic colloid” I. Drikis, A. Cebers	<i>Latvia</i>
11:45 – 12:00	OS8-1122	“Structure factor of ferrofluids with chain aggregates: theory and computer simulations” E. Pyanzina, S. Kantorovich, J. J. Cerda, C. Holm	<i>Russia</i>
12:00 – 13:30		Lunch	
13:30 – 18:00		Excursion – Matsushima	
20:00 – 21:30		International steering committee meeting	

Thursday, 5th August, 2010			
9:00 – 10:00	OS9-1	Oral Session 9-1 : Hydrodynamics of Magnetic Fluid Chairman: Prof. Y. Ido, Prof. M. Zahn	
9:00 – 9:15	OS9-1217	“Brownian dynamics simulations of transient magnetoviscosity of dilute ferrofluids” D. Soto-Aquino, C. Rinaldi	<i>Puerto Rico</i>

9:15 – 9:30	OS9-1128	“Experimental analysis on MR fluid channel flow dynamics with complex fluid-wall interactions” H. Nishiyama, H. Takana, K. Shinohara, K. Mizuki, K. Katagiri, M. Ohta	<i>Japan</i>
9:30 – 9:45	OS9-1190	“Ultrasound velocimetry of ferrofluid spin-up flow measurements using a spherical coil assembly to impose a uniform rotating magnetic field” S. Khushrushahi, M. Zahn	<i>USA</i>
9:45 – 10:00	OS9-1092	“Drag enhancement due to macro-chains in uniformly magnetized ferrofluids” P. Yecko, W-K. Lee, A. D. Trubatch, M. Vieira	<i>USA</i>
10:00 – 10:50	PL5	Plenary Lecture 5 (Open to Public) Chairman : Dr. K. Raj	
		“Are ferrofluids with giant magnetic moment possible?” Dr. R. E. Rosensweig	<i>USA</i>
11:00 – 12:00	OS9-2	Oral Session 9-2 : Hydrodynamics of Magnetic Fluid Chairman: Prof. T. Sawada, Prof. A. M. Figueiredo Neto	
11:00 – 11:15	OS9-1035	“Rheological characteristics of magnetic viscoelastic fluids and their lubrication in a cone-plate magnetic coupling” X-D. Niu, H. Yamaguchi, X-R. Zhang, S. Suzuki	<i>Japan</i>
11:15 – 11:30	OS9-1157	“Ferrofluid-in-oil two-phase flow patterns in a flow-focusing microchannel” T. S. Sheu, Y. T. Chen, F. L. Lih, J. M. Miao	<i>Taiwan, R.O.C.</i>

11:30 – 11:45	OS9-1231	“Taylor-Couette flow of ferrofluid: spin field and spin boundary condition effects”	<i>USA</i>
		A. Mukherjee, W. Childress, P. Yecko	
11:45 – 12:00	OS9-1228	“The influence of magnetic field swept rate on the ultrasonic propagation velocity of magnetorheological fluids”	<i>Japan</i>
		M. A. Bramantya, T. Sawada	
12:00 – 13:30	PS3	Poster Session 3	
13:30		Closing Ceremony	