

# *ICRIS'07 Program*

## **Monday, June 11, 2007**

9:30-9:35

Welcome Address, N. Esaki (Director of ICR, Kyoto University, Japan)

9:35-9:40

Opening Remarks, T. Fukuda (ICRIS'07 Chairperson, ICR, Kyoto University, Japan)

9:40-10:20

*Pulsed laser experiments for detailed studies into free-radical polymerization kinetics*

M. Buback (Universität Göttingen, Germany)

10:20-10:45

*Recent advances in organoheteroatom-mediated living radical polymerization*

S. Yamago (ICR, Kyoto University, Japan)

10:45-11:10

*Thermo-responsive diblock copolymers synthesized via organotellurium-mediated controlled radical polymerization (TERP)*

S. Yusa, S. Yamago, M. Sugahara, S. Morikawa, T. Yamamoto, and Y. Morishima  
(University of Hyogo, Japan)

11:10-11:35

*Complex polymer synthesis by late and early transition metal catalyzed living radical and ring opening polymerizations*

A. D. Asandei, G. Saha, Y. Chen, and I. W. Moran (University of Connecticut, U.S.A)

11:35-13:00 Lunch

13:00-13:40

*Block copolymer electrolytes for lithium battery applications*

M. Singh and N. P. Balsara (University of California, Berkeley, U.S.A)

13:40-14:05

*Synthesis and nanoscale phase separation of well-defined mixed homopolymer brushes on silica particles*

B. Zhao (University of Tennessee, U.S.A)

14:05-14:45

*Magnetic alignment and patterning of feeble magnetic materials*

T. Kimura (Kyoto University, Japan)

14:45-15:10

*Orientation dynamics of lamellae of block copolymer under an electric field*

T. Taniguchi, R. Uchino, M. Sugimoto, and K. Koyama (Yamagata University, Japan)

15:10-15:30 Break

15:30-16:10

*Disordered structure of polymer materials as revealed by high-resolution solid-state NMR spectroscopy*

F. Horii (ICR, Kyoto University, Japan)

16:10-16:50

*Structure and dynamics of polymer chains in polymer nanocomposites*

F. Lauprêtre and C. Lorthioir (CNRS-UMR 7182, France)

16:50-17:15

*Structural and dynamical properties of PEO-based nanocomposites studied by advanced solid-state NMR methods*

T. J. Bonagamba, E. R. deAzevedo, and P. Judeistein (Universidade de Sao Pãulo, Brazil)

## **Tuesday, June 12, 2007**

9:00-9:40

*Nanostructured functional materials via ATRP with ppm amounts copper*

K. Matyjaszewski (Carnegie Mellon University, U.S.A)

9:40-10:20

*Mechanical properties in polymeric nanoscale line gratings*

R. D. Hartschuh, A. Kisliuk, V. N. Novikov, A. P. Sokolov, C. L. Soles, and W. L. Wu (National Institute of Standards and Technology, U.S.A)

10:20-10:40 Break

10:40-11:20

*New development of concentrated polymer brushes*

T. Fukuda, Y. Tsujii, K. Ohno, and A. Goto (ICR, Kyoto University, Japan)

11:20-11:45

*Microdomain orientation in chelate-doped block copolymers with high magnetic field*

A. Yasui, F. Kimura, T. Kiyoshi, T. Kimura, J. Yeonhwan, and S. Sakurai (Kyoto Institute of Technology, Japan)

11:45-13:00 Lunch

13:00-13:40

*Graphitic nanotubes by programmed self-assembly*

T. Aida and T. Fukushima (The University of Tokyo, Japan)

13:40-14:20

*Polymer architecture from chain-growth condensation polymerization and its self-assembly*

T. Yokozawa (Kanagawa University, Japan)

14:20-15:00

*Temperature-induced reversible distortion along the director observed for monodomain nematic elastomer of cross-linked main-chain polyester*

J. Watanabe (Tokyo Institute of Technology, Japan)

15:00-15:25

*Lower and upper critical solution temperature type of phase separation in aqueous mixture of polyelectrolytes*

K. Nishida, T. Kanaya, T. Tsubouchi, and T. Hirabayashi (ICR, Kyoto University, Japan)

15:25-16:00 Break

### **Poster session (16:00-18:00)**

- P-01. *Thermochromism of polydiacetylene with a hysteresis loop in the solid state and in solution*  
S. Dei and A. Matsumoto
- P-02. *Solid-state polymerization of muconic ester thin films fabricated by vapor deposition*  
K. Onodera and A. Matsumoto
- P-03. *Synthetic methodology for well-defined polymer hybrids based on polyolefins – Creation of new polymer materials –*  
N. Kawahara, J. Saito, S. Matsuo, H. Kaneko, T. Matsugi, and N. Kashima
- P-04. *Creation of polyolefin hybrids by using controlled radical polymerization*  
H. Kaneko, J. Saito, N. Kawahara, S. Matsuo, T. Matsugi, and N. Kashima
- P-05. *Dynamics of the adhesion between rubber particle and solid substrate – using molecular dynamics simulations and experiments –*  
H. Morita, Y. Morishita, D. Kaneko, and M. Doi
- P-06. *Study of cell-PGA/collagen nanofibers composite interaction*  
S. Hattori, Y. Yokoyama, T. Furong, and H. Kobayashi
- P-07. *Assembling of hydrogen-bonding-polymers using high pressure technology*  
T. Kimura, K. Nam, T. Ono, H. Yoshizawa, T. Fujisato, and A. Kishida
- P-08. *Development of highly-ordered structure collagen hydrogel I: Controlled amide formation for collagen film in ethanol/water solutions*  
K. Nam, T. Kimura, and A. Kishida
- P-09. *Formation and physicochemical features of hybrid threadlike micelles in aqueous solution*  
N. Nakamura and T. Shikata
- P-10. *Nanosecond dynamics of dense PMMA brush studied by fluorescence depolarization method*  
H. Aoki, M. Kitamura, S. Ito
- P-11. *Germanium-, tin-, and phosphorus-catalyzed living radical polymerizations of styrene and methacrylates*  
A. Goto, N. Hirai, T. Wakada, H. Zushi, Y. Tsujii, and T. Fukuda
- P-12. *Super lubrication between concentrated polymer brushes in good solvent*  
K. Okayasu, Y. Tsujii, K. Ohno, and T. Fukuda
- P-13. *Synthesis and applications of silica particles grafted with concentrated polymer brush*  
K. Ohno, T. Morinaga, Y. Tsujii, and T. Fukuda

- P-14. *Synthesis of zinc sulfide nanoparticles grafted with concentrated polystyrene brushes*  
V. Ladmiral, T. Morinaga, K. Ohno, Y. Tsujii, and T. Fukuda
- P-15. *Protein repellency of concentrated polymer brushes prepared by surface-initiated living radical polymerization*  
C. Yoshikawa, A. Goto, A. Kishida, Y. Tsujii, and T. Fukuda
- P-16. *Structure and viscoelasticity of wormlike micellar solutions under steady shear flows*  
A. Takada
- P-17. *ESR study of radical polymerizations of acrylates using model radical precursors prepared by ATRP*  
A. Kajiwara and S. Arata
- P-18. *ESR study of radical polymerizations of methacrylates using model radical precursors prepared by ATRP*  
A. Kajiwara and H. Nakajima
- P-19. *Development of organobismuthine-mediated living radical polymerization*  
E. Kayahara, M. Kotani, B. Ray, and S. Yamago
- P-20. *Synthesis of end-functionalized polymers by reverse SBRP method using various azo-compounds and distibines*  
M. Togai, T. Yamada, N. Pan, and S. Yamago
- P-21. *Stress relaxation during strain-induced crystallization of cross-linked natural rubber*  
M. Tosaka, S. Kohjiya, and K. Senoo
- P-22. *Structure for e-spun silk fibroin nanofibers*  
Y. Kawahara, N. Matsumura, A. Nakayama, and M. Tsuji
- P-23. *Morphological study on electrospun nanofibers of polydioxanone*  
A. Nakayama, Y. Kawahara, and M. Tsuji
- P-24. *Molecular and electronic structure analyses of *N,N'*-diphenyl-*N,N'*-di(*m*-tolyl)benzidine by solid-state NMR and quantum chemical calculations*  
T. Yamada, H. Kaji, and F. Horii
- P-25. *Solid-state NMR characterization of structure and hydrogen bonding of polymer materials*  
Q. Luo, S. Suzuki, Y. Kanie, H. Kaji, F. Horii, T. Shimizu, M. Tansho, K. Takegoshi, T. Nemoto, and T. Mizuno
- P-26. *Formation and structure of liquid crystals in aqueous suspensions of tunicate cellulose microfibrils*  
A. Hirai, M. Ikuno, F. Horii, and M. Tsuji
- P-27. *Solid-state <sup>29</sup>Si NMR characterization of poly(dimethylsilane) in the mesophase*  
H. Kaji, A. Mino, T. Yamada, and F. Horii
- P-28. *Micropatterning and stimulus alignment of carbon nanotubes in polymer composites using modulated magnetic field*  
G. Piao, F. Kimura, T. Takahashi, Y. Moritani, H. Awano, S. Nimori, K. Tsuda, K. Yonetake, and T. Kimura

- P-29. *Relation between melting behavior of solvent and morphology in syndiotactic polypropylene with different stereoregularity gel*  
K. Yamashita and T. Nakaoki
- P-30. *Glass transition temperature of polystyrene thin films*  
R. Inoue, T. Kanaya, K. Nishida, and Y. Tsujii
- P-31. *Mesomorphic phase of poly(butylene-2,6-naphthalate)*  
T. Konishi, K. Nishida, and T. Kanaya
- P-32. *Crystallization of poly(L-lactic acid) and its melting behavior*  
N. Rahman, T. Kawai, G. Matsuba, K. Nishida, T. Kanaya, M. Nakano, H. Okamoto, J. Kawada, A. Usuki, N. Honma, K. Nakajima, and M. Matsuda
- P-33. *Phase separation of polystyrene/poly(vinyl methyl ether) in thin film*  
H. Ogawa, R. Inoue, T. Kanaya, K. Nishida, and G. Matsuba
- P-34. *Structural formation process of polyethylene blend with ultra-high molecular weight component*  
G. Matsuba, K. Nishida, and T. Kanaya
- P-35. *The crystal structure of the collagen-model peptide, (Pro-Pro-Gly)<sub>4</sub>-Hyp-Asp-Gly-(Pro-Pro-Gly)<sub>4</sub>*  
T. Kawaguchi, M. Shimura, C. Hongo, K. Noguchi, K. Okuyama, K. Mizuno, and H. P. Bächinger
- P-36. *Decomposition of transient stress in viscoelastic polymer blends*  
Q. Chen, W. Yu, and C. Zhou
- P-37. *Dielectric behavior of cis-polyisoprene in carbon dioxide under high pressure*  
Y. Matsumiya and H. Watanabe
- P-38. *Rheo-SANS behavior of entangled polybutadiene with local label under fast shear flow*  
T. Iwamoto, H. Watanabe, and Y. Takahashi
- P-39. *Dielectric relaxation and dynamics of poly(lactic acid) in carbon dioxide at high pressure*  
T. Iwashige, Y. Matsumiya, T. Inoue, and H. Watanabe
- P-40. *The individual rotational dynamics of T4-DNA in concentrated aqueous solutions*  
H. Sato, Y. Masubuchi, and H. Watanabe
- P-41. *Coarse-grained Brownian dynamics simulation for diblock copolymer melts based on the soft dumbbell model*  
T. Uneyama
- P-42. *Viscoelastic and dielectric behavior of a polyisoprene/poly(4-tert-butyl styrene) miscible blend*  
H. Watanabe

**18:00-20:00 Banquet (Yamauchi Hall, Shiran Kaikan)**

## Wednesday, June 13, 2007

9:00-9:40

*Characterization of ultrahydrophobic and ultrahydrophilic polymer surfaces through precise surface structure design*

A. Takahara, H. Yamaguchi, Y. Terayama, K. Honda, Y. Matsuda, and M. Kobayashi  
(Kyushu University, Japan)

9:40-10:05

*Phase behaviour of novel miktoarm star terpolymers*

D. G. Bucknall (Georgia Institute of Technology, U.S.A)

10:05-10:25 Break

10:25-11:05

*Micro-meso modeling of polymer adhesions*

M. Doi (The University of Tokyo, Japan)

11:05-11:30

*Morphology of polymer blends with slip viscous interface*

W. Yu (Shanghai Jiao Tong University, China)

11:30-11:55

*Entangled polymer dynamics described by primitive chain network model*

Y. Masubuchi, G. Ianniruberto, F. Greco, and G. Marrucci (ICR, Kyoto University, Japan)

11:55-12:00

Closing Remarks, T. Kanaya (ICR, Kyoto University, Japan)