

9 ID MRCS

9th International Discussion Meeting on
Relaxations in Complex Systems

Collaboration with ISSP International Workshop

New results, Directions and Opportunities

Abstracts book

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On the breakdown of the coincidence between 1st- and 2nd- order optical susceptibility below THz region

Yuko Amo¹, Anan Hisamiti², Takuya Oomura², Takeshi Usuki¹ & Yasuo Kameda¹

¹Faculty of Science, Yamagata University, Japan

²Graduate School of Science and Engineering, Yamagata University, Japan

If a vibration mode is IR (1st order optical process) and Raman (2nd order optical process) active, the relevant characteristic frequencies of the IR and the Raman band coincide. Below 100 cm⁻¹, many broad bands due to intermolecular vibration and collisions are both IR and Raman active because the symmetry of these intermolecular motions is lost. The dielectric loss multiplied by angular frequency gives absorption profile of electromagnetic wave, and leads to the low frequency side of the IR spectrum. The characteristic frequency of the principal dielectric relaxation mode and the corresponding Raman mode should coincide.

However, we found that the principal dielectric relaxation mode and the Raman lowest frequency mode will not generally coincide. The temperature dependence of the dielectric relaxation time and the relaxation time of Raman mode are different, and the difference becomes greater with decreasing temperature.

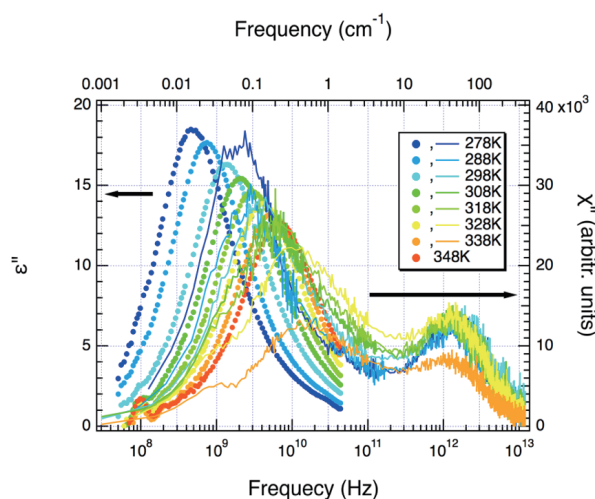


Fig.1 Raman spectra and dielectric loss spectra of ethylene glycol

Watanabe et al. found the Stokes to anti-Stokes intensity ratio is slightly deviated from the thermal factor below 4 cm⁻¹ in some organic solvent [1]. The derivation of the thermal factor assumes the existence of discrete energy level.

We interpret the origin of the relaxation mode' to be the continuous eigenvalue generated by the interaction f and only if the system has the discrete eigenvalues. The search for a mathematical formula that can describe this phenomenon is a future problem.

[1] Watanabe et al. Chem. Phys. Lett. 222/2001/142-148

Poster program



Abstracts are available on the 9IDMRCS website.

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Scientific program

-Program

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G-BP**Boson Peak**

Mon. 14 August

Poster session room

P-G-BP-1a**Low frequency vibrational density of state of Janus-polynorbornenes
– The dependence of the Boson peak on the nanophase separated structure.**

Mohamed A. Kolmangadi, Paulina Szymoniak, Martin Böhning, Reiner Zorn,
Andreas Schönhals

P-G-BP-2a**Low-frequency Vibrations of Shear-Stable Amorphous Solids**

Vishnu V. Krishnan, Surajit Chakraborty, Kabir Ramola, Smarajit Karmakar

G-DH**Dynamic Heterogeneity & Glass Transition**

Mon. 14 August

Poster session room

P-G-DH-1a**Quasivoid-Induced Structural Relaxation in Colloidal Glass Formers:
Microscopic origin of stringlike Motions**

Cho-Tung Yip, Chor-Hoi Chan, Masaharu Isobe, Chi-Hang Lam

P-G-DH-2a**Diffusion-Coefficient Power Laws and Defect-Driven Glassy Dynamics in Swap
Acceleration**

Gautham Gopinath, Chun-Shing Lee, Xin-Yuan Gao, Xiao-Dong An,
Chor-Hoi Chan, Cho-Tung Yip, Hai-Yao Deng, Chi-Hang Lam

P-G-DH-3a**Prediction of a Trigger of Hopping Motion in Deeply Supercooled Liquid of
Binary Hard Disk Systems**

Ryohei Hanai, Cho-Tung Yip, Chi-Hang Lam, Masaharu Isobe

P-G-DH-4a**Stokes-Einstein Breakdown in Stillinger-Weber Silicon**

Himani Verma, Vishwas V Vasisht, Shiladitya Sengupta

P-G-DH-5b**New insights on the glass transition through optical manipulation of chromophores**

Eden Dzik, David Carrière, Christophe Fajolles, Jean-Pierre Dognon, François Ladieu, Cecile Wiertel-Gasquet

P-G-DH-6b**Double glass transitions in single-component homogeneous liquids**

Ben A. Russell, Mario González-Jiménez, Nikita V. Tukachev, Laure-Anne Hayes, Tajrian Chowdhury, Uroš Javornik, Gregor Mali, Manlio Tassieri, Joy H. Farnaby, Hans M. Senn, Klaas Wynne

P-G-DH-7b**Spatial Heterogeneities in Structural Temperature Cause Kovacs' Expansion Gap Paradox in Aging of Glasses**

Matteo Lulli, Chun-Shing Lee, Hai-Yao Deng, Cho-Tung Yip, Chi-Hang Lam

P-G-DH-8b**Relation between dynamic and structural heterogeneities in metallic glass revealed by 5D-STEM**

Katsuaki Nakazawa, Kazutaka Mitsuishi, Shinji Kohara, Koichi Tsuchiya

P-G-DH-9b**Statistical properties of Microstring Activation in Deeply Supercooled Liquids of Binary Hard Disk Systems**

Motoki Wakita, Ryohei Hanai, Yuito Kakihara, Cho-Tung Yip, Chi-Hang Lam, Masaharu Isobe

P-G-DH-10b**Slow timescales in vibrofluidized granular materials**

Andrea Plati, Giuseppe Foffi, Frank Smallenburg, Etienne Feyen, Raphaël Maire, François Boulogne, Frédéric Restagno, Andrea Puglisi, Andrea Gnoli, Andrea Baldassarri, Giacomo Gradenigo

G-TS**Theory & Simulations of Glasses & Glass Transition**

Thu. 17 August

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Mon. 14 August

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P-G-UG-1a**Creating bulk ultrastable glasses by random particle bonding**Misaki Ozawa, Yasutaka Iwashita, Walter Kob, Francesco Zamponi**P-G-UG-2a****Deposition Temperature Dependencies of Annealing Effect in Vapor-deposited Ultrastable Phenolphthalein Glass**Ibuki Furuno, Yuta Kishimoto, Haruhiko Yao, Soichi Tatsumi**G-TP****Thermal Properties & Glass Transition**

Mon. 14 August

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- P-G-TP-2a** **New experimental setup for measurements of thermal conductivity and specific heat in glassy materials at low temperatures**
Daria Szewczyk, Miguel A. Ramos
- P-G-TP-3a** **Fast Differential Scanning Calorimetry: novel approaches for data analysis of transitions in organic molecular glass-formers**
Simone Capaccioli, Daniele Sonaglioni, Elpidio Tombari
- P-G-TP-4a** **Analysis of the configurational heat capacity of polystyrene and polyisobutylene above the glass transition temperature**
Eri Nishiyama, Marika Yokota, Itaru Tsukushi
- P-G-TP-5a** **Polymer Molecular Weight Dependences of Glass Transition of Dimer-polymer Mixtures in α -methyl Styrene Systems**
Tomoyuki Yamaguchi, Gennki Kikumoto, Kenngo Minamimoto, Haruhiko Yao, Soichi Tatsumi

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Koun Shirai
- P-G-TP-7b** **Relationship between viscosity behavior and relaxation of amorphous $\text{Ge}_{25}\text{Se}_{75}$ and $\text{As}_{20}\text{Se}_{80}$ in the glass transition region**
Michaela Včeláková, Pavla Honcová, Petr Košťál, Jaroslav Barták
- P-G-TP-8b** **Glass transitions of 2-bromothiophene-2-chlorothiophene solid solution systems confined within mesoporous silica gel**
Daisuke Kato, Atsushi Nagoe, Mariko Noguchi, Hiroki Fujimori
- P-G-TP-9b** **Evaluation of absolute value of heat capacity for polyisobutylene above 380 K by DSC**
Ryoto Suzuki, Itaru Tsukushi
- P-G-TP-10b** **Do the material properties of a vitrified material correlate with protection during desiccation?**
John F. Ramirez, U.G.V.S.S. Kumara, Navamoney Arulsamy, Thomas C. Boothby

P-G-TP-11b **Glassy heat capacity from overdamped phasons and a hypothetical phason-induced superconductivity in incommensurate structures**
Cunyuan Jiang, Alessio Zaccone, Chandan Setty, Matteo Baggioli

P-G-TP-12b **Research of Heat Transfer Finite Element Analysis of Solar Panels**
Jaewoong Kim, Changmin Pyo

G-NI **Network & Inorganic Glasses**

Thu. 17 August

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P-G-NI-1b **Atomic structure of MgO–SiO₂ liquid and glasses**
Yuta Shuseki, Atsunobu Masuno, Shinji Kohara

G-EG **Electron Glasses**

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P-G-EG-1a **A glassy structural transition in a charge-frustrated organic conductor probed by polarized femtosecond spectroscopy**
Satoshi Tsuchiya, Koichi Nakagawa, Hiromi Taniguchi, Yasunori Toda

P-G-EG-2a **Competing orders and relaxation dynamics of a frustrated charge system with Coulomb interaction**
Koki Kimata, Harukuni Ikeda, Masafumi Udagawa

P-G-EG-3a **Semidefinite programming approach to probe glassy quantum systems**
Jun Takahashi, Chaithanya Rayudu, Cunlu Zhou, Robbie King, Kevin Thompson, Ojas Parekh

G-SM**Spin Glasses & Disordered Magnets**

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P-G-SM-1a**Strong non-equilibrium effects and slow relaxation in the multi-metastable states of the frustrated magnet DyRu₂Si₂**Subaru Yoshimoto, Yoshikazu Tabata, Takeshi Waki, Hiroyuki Nakamura**P-G-SM-2a****Biased thermodynamics can explain the behaviour of smart optimization algorithms that work above the dynamical threshold**Angelo Giorgio Cavaliere, Federico Ricci-Tersenghi**P-G-SM-3a****Spatial evolution of RSB in generalized DBMs**Yuki Rea Hamano, Hajime Yoshino**P-G-SM-4a****Exploring Phase Transitions in One-Dimensional Diluted Power-Law XY Spin Glass: A Numerical Investigation**Bharadwaj Vedula, M. A. Moore, Auditya Sharma**G-TV****Interrelation between T & V in Dynamics of Liquids & Polymers**

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P-G-TV-1a**Can glass-forming liquids be “simple”?**Vadim Brazhkin**G-LO****Local Order in Liquids & Glasses**

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P-G-LO-1a**Vorotis: Software for Voronoi tessellation analysis using the polyhedron code**Kengo Nishio**P-G-LO-2a****Long-range anisotropy in a Pd-based metallic glass**Peihao Sun, Alessandro Martinelli, Federico Caporaletti, Alfred Q. R. Baron, Konrad Samwer, J. B. Hastings, Giulio Monaco

P-G-LO-3a **Estimation of Cooperative Rearranging Regions and Configurational Entropy in Monatomic Glass-Forming Liquid**
Ayata Ueno, Tomoko Mizuguchi

P-G-LO-4a **Liquid structural features derived from X-ray diffraction and topological data analysis of iron and silicon**
Akitoshi Mizuno, Osamu Terakado, Ahmed Kamada, Ayaka Nakano, Daichi Aoshima, Koji Ohara, Tadahiko Masaki, Shinji Kohara

P-G-LO-5a **Characterization of component segregation in co-deposited glasses of TCTA and Ir(ppy)₃**
Yejung Lee, Jianzhu Ju, Shinian Cheng, Junguang Yu, Lian Yu, M. D. Ediger

L-WI **Water & Ice Anomaly**

Mon. 14 August

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- What a comparison of water and tellurium reveals -**
Yukio Kajihara

P-L-WI-2a **Rapid Crystallization at the Surface of Vapor-Deposited Amorphous Water through Hydrates Formation and Dissociation at 120 K**
Reo Sato, So Taniguchi, Naoki Numadate, Tetsuya Hama

P-L-WI-3a **Thermal Behavior and Dynamics of Water Confined in Sephadex G-25 Gels**
Hiroaki Minato, Yoshiharu Mukoyama, Norio Murase, Hiroshi Akiba, Osamu Yamamuro, Noriko Onoda-Yamamuro

P-L-WI-4a **Unusual heat generation of nanoconfined water in reverse micelles under microwave irradiation**
Hiroshi Murakami

P-L-WI-5a **Breaking the Ice with Neural Network Potentials: reproducing the nucleation properties of the mW water model**
F. Guidarelli Mattioli, F. Sciortino, J. Russo

P-L-WI-6b

Structure of water under confinement in periodic mesoporous organosilicas (PMOs)

Niels Giesselmann, Sophia Schwake, Philip Lenz, Tamas Simon, Wonhyuk Jo, Christian Köhn, Nele Striker, Michael Fröba, Felix Lehmkuhler

P-L-WI-7b

Freezing of reorientational motion of hydration water in reverse micelles at room temperature

Hiroshi Murakami, Yuko Kanahara

P-L-WI-8b

The ω^3 scaling of the vibrational density of states in quasi-2D nanoconfined solids

Yuanxi Yu, Matteo Baggioli, Liang Hong

P-L-WI-9b

Experimental evidence of the short-scale solid-like dynamics of liquids using nano-confinement

Yuanxi Yu, Sha Jin, Xue Fan, Dehong Yu, Victoria García Sakai, Liang Hong, Matteo Baggioli

P-L-WI-10b

Proton kinetic energy anomaly and phase transition of nano-confined water

Mohd Moid, Yacov Finkelstein, Raymond Moreh, Prabal K. Maiti

L-HB

Water, Alcohols & Hydrogen Bonded Systems

P-L-HB-1a

Anomaly Brownian Motion in Water-Ethanol Mixtures

Ken Judai, Satoshi Shibuta, Kazuki Furukawa

P-L-HB-2a

Vibrational Frequency Fluctuations of Thermoresponsive Polymer in Aqueous Solutions Studied by 2D-IR Spectroscopy and Molecular Dynamics Simulations

Yuki Fujii, Hikaru Ioka, Chihiro Hashimoto, Ikuo Kurisaki, Shigenori Tanaka, Kaoru Ohta, Keisuke Tominaga

P-L-HB-3a

Nonthermal acceleration of protein hydration by sub-THz irradiation

Masahiko Imashimizu, Jun-ichi Sugiyama, Yuji Tokunaga, Mafumi Hishida,
Masahito Tanaka

Thu. 17 August

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P-L-HB-4b

Effect of thermobaric history on the elastic properties of propylene glycol oligomer glasses

Igor Danilov, Elena Gromnitskaya, Vadim Brazhkin

P-L-HB-5b

Dielectric Relaxations of Polymer and Water in Aqueous Solutions of Poly (vinyl methyl ether) as a Polymer with a Low Glass Transition Temperature

Yuka Arai, Masanobu Takatsuka, Kaito Sasaki, Rio Kita, Shin Yagihara,
Naoki Shinyashiki

P-L-HB-6b

Water Dynamics in Aqueous Dipeptide Solutions Studied by ^2H NMR and BDS

Sandra Krüger, Elisa Steinrücken, Michael Vogel

P-L-HB-7b

Correlation between surface and bulk hydrogen-bond networks in amorphous water studied by IR-MAIRS

Takumi Nagasawa, Takeshi Hasegawa, Naoki Numadate, Tetsuya Hama

P-L-HB-8b

The lowest frequency Raman spectra mode and Debye relaxation mode in alcohols and aprotic solvents probed by Raman scattering and Dielectric spectroscopy

Koshi Ozama, Yuko Amo, Yasuo Kameda, Takeshi Usuki

P-L-HB-9b

Generation of water nanoclusters by desorption from a PEDOT:PSS polymer matrix

Ralph Ugalino, Mustafa al-Samarai, Hisao Kiuchi, Yoshihisa Harada

L-IL**Ionic Liquids, Ionic Polymers & Ionic Plastic Crystals**

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P-L-IL-1a**Role of conformational entropy in low melting point of ionic liquids**Hiroki Sumida, Yoshifumi Kimura, Takatsugu Endo**P-L-IL-2a****Viscosities, Thermal Properties, and Fragilities of Surfactant Ionic Liquids and Ionic Liquid Mixtures with Alkane**Xuechen Liu, Yue Peng, Ruben Dario Falcone, Hideaki Shirota**P-L-IL-3a****Low-Frequency Spectra of Hydrated Ionic Liquids having Different Kosmotropicity**Maharroof Koyakkat, Kyoko Fujita, Hideaki Shirota**P-L-IL-4a****Stokes-Einstein-Debye Breakdown in Ionic Liquids and Ionic Liquid-Water Mixtures Studied by NMR**Elisa Steinrücken, Manuel Becher, Michael Vogel**P-L-IL-5a****Interionic Motional Coupling in Charge Transport in the Ionic Liquid 1-Ethyl-3-Methylimidazolium Methyl Phosphonate**Jagdeep Kaur, Sophia Sagala, Connor Hicks, Edward L. Quitevis**P-PD****Polymer Dynamics, Viscoelasticity & Reology**

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P-P-PD-1a**Modifying Glass Transition Temperature through Block-Random Copolymer Sequence**Lauren W. Taylor, Richard A. Register, Rodney D. Priestley**P-P-PD-2a****The conformational transitions of polymer chains in shear flow measured by FRET**Wei Chen

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Mithun Madhusudanan, Jotypriya Sarkar, Sudeshna Dhar, Mithun Chowdhury

P-P-PD-4a **Simultaneously Probing Viscosity in Thin Immiscible Polymer Bilayer Films by Dewetting**
Sudeshna Dhar, Mithun Madhusudanan, Mithun Chowdhury

P-P-PD-5a **Damage-detectable and Self-healable Photoluminescent Dual Dynamic Supramolecular Networks**
Yeong Jun Yu, Heejung Kim, Chan-Moon Chung, Jae Woo Chung

P-P-PD-6a **Non-Gaussianity and dynamic heterogeneity in ring polymer melts**
Shota Goto, Kang Kim, Nobuyuki Matubayasi

P-P-PD-7a **Polarization Imaging of Shear Band in Couette Flow**
Naoki Shintani, Tadashi Inoue

P-P-PD-8a **New Experimental Evidence for Thermodynamic Links to the Kinetic Fragility of Glass-forming Polymers**
Guozhang Wu, Yuanbiao Liu, Gaopeng Shi

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Mohamed A. Kolmangadi, Paulina Szymoniak, Glen Smales, Martin Böhning, Andreas Schönhals

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Jiaxin Zhao, Matthew Reynolds, Andrew Wilson, Johan Mattsson

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Andreas Thum, David Bienek, Andreas Heuer

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Masami Nirei, Akira Shinohara, Takashi Nakanishi, Seiko Ohira-Kawamura,
Hiroshi Akiba, Osamu Yamamuro, Maiko Kofu

P-P-PD-13b

**Thermophysical Properties of Polystyrene (PS)-Polybutyl Methacrylate (PBMA)
Multiblock Copolymers**

Taisei Ishiyama, Kaito Sasaki, Yosuke Okamura, Rio Kita, Naoki Shinyashiki,
Hong Zhang, Per B. Zetterlund

P-P-PD-14b

Hierarchical Dynamics of Hybrid Polymers

Huiming Xiong

P-P-PD-15b

Effect of Rotaxane Crosslinking on Modulus and Toughness

Seigo Hirai, Osamu Urakawa, Tadashi Inoue

P-P-PD-16b

**Computer simulation guided generation and stabilization of expanded free-
standing**

Hsiao-Ping Hsu, Manjesh K. Singh, George Fytas, Kurt Kremer

P-PN

Polymer Nanocomposites & MOF

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P-P-PN-1a

**Penetrated Cyano-bridged spin-crossover coordination polymer with
4-pyrimidine-type ligand and guest**

Kosuke Kitase, Daisuke Akahoshi, Takafumi Kitazawa

P-P-PN-2a

**The cooperative effect by substituent-substituent contact on spin crossover
behavior in 2-dimensional Hofmann-like coordination polymers**

Takashi Kosone, Aoi Fukushima

P-P-PN-3a

**Preparation and Characterization of Mechanically-Enhanced Poly(butylene
succinate)/Polylactide (PBS/PLA) Nanocomposite with Surface-Modified
Nanocellulose**

Hee Cheol Kang, Chang Yong Jun, Jae Woo Lee, Jae Woo Chung

P-P-PN-4a

Structural Relaxation & Rearrangement in MOFs

Wessel Winters, Yuanzheng Yue

P-P-PN-5a

Dynamics of absorbed acetonitrile and Mg-ionic conduction in a metal-organic framework MIL-101

Shun Sato, Hiroshi Akiba, Yoshinori Ohmasa, Kaori Taniguchi, Masaaki Sadakiyo, Osamu Yamamuro

P-GN

Polymer Gels & Networks

Thu. 17 August

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P-P-GN-1b

Fisher-Widom line and dynamical behavior for systems with competing attractive and repulsive interaction

Matthias Gimperlein, Michael Schmiedeberg

P-P-GN-2b

Investigating the Phase Behavior of Alternating Amphiphilic Copolymers in Water using Small-Angle X-Ray Scattering

Tulika Sharma, Ralf Biehl, Margarita Kruteva, Martin Dulle, Jürgen Allgaier, Stephan Förster

P-P-GN-3b

The design of Ion-linked double-network hydrogel for pressure colorimetric sensor upon the rheologic properties of hydrogels with the dispersion of gold nanoparticles

Yi-Hsueh, Chen, Ping-Huan Tsai, Jr-Jeng Ruan

P-P-GN-4b

Strain-induced Crystallization for Tough and Reversible Ion Gels

Takato Enoki, Kei Hashimoto, Kohzo Ito, Koichi Mayumi

P-P-GN-5b

Solvent Dynamics of Solutions of pNIPAM in Water-Ethanol Mixtures as Studied by NMR

Christoph Säckel, Regine von Klitzing, Michael Vogel

CJA-SD**Colloidal Systems & Dispersions**

Thu. 17 August

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P-CJA-SD-1b**Microsecond Dynamics in Complex Liquids with MHz XPCS**

Francesco Dallari, Irina Lokteva, Wojciech Roseker, Fabian Westermeier,
Verena Markmann, Claudia Goy, Gerhard Grübel, Felix Lehmkuhler

P-CJA-SD-2b**Microscopic pathways for stress-relaxations in a colloidal glass**

Alessandro Martinelli, Francesco Dallari, Federico Caporaletti, Michael Sprung,
Gerhard Grübel, Giulio Monaco

P-CJA-SD-3b**Structural origins of unique mechanical evolution of colloidal gels**

Yinqiao Wang, Michio Tateno, Hajime Tanaka

P-CJA-SD-4b**Dynamical impact of dense suspension of millimetre particles**

Hirokazu Maruoka, Hisao Hayakawa

CJA-GJ**Granular Materials & Jamming**

Mon. 14 August

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P-CJA-GJ-1a**Hyperuniformity in disk packings between extremes of order and disorder**

Duc Dam T., Takeshi Kawasaki, Atsushi Ikeda, Kunimasa Miyazaki

P-CJA-GJ-2a**Mechanical self-organization of particle networks under uniaxial compression**

Michio Tateno, Yinqiao Wang, Hajime Tanaka

P-CJA-GJ-3a**Jamming of granular materials in channel flow : effect of cohesion**

Kiwamu Yoshij, Michio Otsuki

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P-CJA-GJ-4b**Unified understanding of nonlinear viscoelasticity near jamming transition density**

Hidemasa Bessho, Takeshi Kawasaki, Kunimasa Miyazaki

P-CJA-GJ-5b

The generation and dynamics of a granular jet induced by a sudden acceleration

Kazuya U. Kobayashi, Yuzuki Sato, Yoshiyuki Tagawa

P-CJA-GJ-6b

Experimental Test of the Edwards Volume Ensemble for Tapped Granular Packings

Ye Yuan, Walter Kob, Yujie Wang

B-AP

Amorphous Pharmaceuticals

Mon. 14 August

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Physical Aging of Hydroxypropyl Methylcellulose Acetate Succinate Spray-dried Dispersions using Fast Scanning Calorimetry

Yejoon Seo, Daniele Cangialosi, Rodney D. Priestley

P-B-AP-2a

Influence of nucleation on dynamics of celecoxib glass

Xue Han, Kohsaku Kawakami

P-B-AP-3a

Amorphous solid dispersion thin films of ketoprofen and polyethylene glycol prepared by spin-coating and their stability as a function of humidity

Chaima Tizaoui, Gabin Gbabode, Haykel Galai, Ivo. B. Rietveld

P-B-AP-4a

Impact of Structural Relaxation in Amorphous Solid dispersions

Tianyun Zhang, Eric J. Munson

P-B-AP-5a

Eutectic mixture formation and relaxation dynamics of coamorphous mixtures of two antifungal imidazole drugs

Wahi Noor, Roberto Macovez, Josep Lluís Tamarit, Michela Romanini

B-GF**Glassy Phenomena in Foods**

Mon. 14 August

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P-B-GF-1a**Glass transition and solidification of Maca (*Lepidium meyenii* Walpers) powder**Takumi Mochizuki, Alex Eduardo Alvino Granados, Kawai Kiyoshi**P-B-GF-2a****Effects of temperature and moisture content on the caking of amorphous carbohydrate powders**Sukritta Anantawittanon, Alex Eduardo Alvino Granados, Kiyoshi Kawai**B-BS****Dynamics of Biomolecular Systems**

Mon. 14 August

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P-B-BS-1a**Theoretical analysis of dopamine chemical reaction network using structural sensitive analysis**Shun Sawada, Kei Tokita**P-B-BS-2a****Investigation of non-thermal effects of sub-terahertz on living *Caenorhabditis elegans***Ryohei Kuriyama, Masahiko Imashimizu, Masahiro Kuramochi**P-B-BS-3a****Universal Dynamical Onset in Water at Distinct Material Interfaces**Lirong Zheng, Liang Hong

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P-B-BS-4b**Effect of 2'-OH Group on Intermolecular Dynamics of Nucleotides in Aqueous Solution**Masako Shimizu, Hideaki Shirota

P-B-BS-5b

Coherent X-ray Scattering Nanoscale Fluctuations in Supercooled Hydrated Proteins

Maddalena Bin, Mario Reiser, Mariia Filianina, Sharon Berkowicz, Sudipta Das, Sonja Timmermann, Wojciech Roseker, Robert Bauer, Jonatan Öström, Aigerim Karina, Katrin Amann-Winkel, Marjorie Ladd-Parada, Fabian Westermeier, Michael Sprung, Johannes Möller, Felix Lehmkuhler, Christian Gutt, Fivos Perakis

P-B-BS-6b

Creatinase: Using Increased Entropy to Improve the Activity and Thermostability

Fan Jiang, Liang Hong

P-B-BS-7a

Resolving Hydrodynamic Function of Proteins in Crowded Solutions Through Coherent X-Ray Scattering with XFELs

Anita Girelli, Mariia Filianina, Maddalena Bin, Sonja Timmermann, Sharon Berkowicz, Mario Reiser, Sebastian Retzbach, Maximilian Senft, Marvin Kowalski, Michelle Dargasz, Nimmi Das, Mohammad Sayed Akhundzadeh, Yuriy Chushkin, Tilo Seydel, Jörg Hallmann, Johannes Möller, Angel Rodriguez-Fernandez, Jan-Etienne Pudell, Felix Brausse, Wei Lu, Wonhyuk Jo, Roman Shayduk, Alexey Zozulya, Anders Madsen, Michael Paulus, Frank Schreiber, Fajun Zhang, Christian Gutt, Fivos Perakis

B-GT

Glass Transition in Biomatter

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P-B-GT-1a

Dynamical observation of the crystallized protein in the living *Caenorhabditis elegans* cells

Ibuki Sugawara, Yoichi Shinkai, Masahiro Kuramochi

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P-LD-CF-1a

Capillary Deformation of Thin Rubbery Polymer FilmQing Wang, Biao Zuo

P-LD-CF-2a

Thermodynamics and dynamics of quasi-one-dimensional confined lattice fluidsJosh M. Gramlich, Richard K. Bowles

P-LD-CF-3a

Influence of Interaction Strength on Glassy Properties of Adsorbed Polymer NanolayersKatelyn Randazzo, Daniele Cangialosi, Biao Zuo, Rodney D. Priestley

P-LD-CF-4a

Predicting polymer adsorption rates from molecular dynamicsErik Thoms, Zijian Song, Simone Simon Napolitano

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P-LD-CF-5b

Molecular dynamics study on 2D aggregate structures of perfluoroalkyl oligomersRyunosuke Yonemori, Tomoko Mizuguchi, Takeshi Hasegawa

P-LD-CF-6b

Molecular Dynamics Simulations of Confined Liquids with Inhomogeneous StructuresSebastian Kloth, Robin Köster, Michael Vogel

P-LD-CF-7b

Investigating the surface effects on drug loaded mesoporous silica nanoparticlesMaría Teresa Viciosa, G. Figari, J. Gonçalves, H. P. Diogo, M. Dionísio, J. P. Farinha

P-LD-CF-8b

Dynamics of amorphous and crystalline methane hydratesMenghan Zhang, Hiroshi Akiba, Osamu Yamamuro

P-LD-CF-9b

Growth of GaN film on nanoporous-ordered GaN/sapphire template for high power semiconductor deviceTae Hoon Seo, Chanyoung Ju, Min Mo Koo, Jaewoong Kim

TR-IC**Ion Conduction in Glasses**

Thu. 17 August

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P-TR-IC-1b**Non-Arrhenius Ionic Conductivity in AgI-based Superionic Conducting Glasses in a Wide Temperature Range**Masahiro Ikeda, Masaru Aniya**P-TR-IC-2b****Ionic Conductivity, Fragility and Cooperativity in Ion Conducting Polymers: A Study based on the BSCNF Model**Masaru Aniya, Masahiro Ikeda**P-TR-IC-3b****Ionic transport mechanism in lithium iron phosphate glasses**Yong Suk Yang, Chang Gyu Baek**TR-MG****Relaxations & Diffusion in Metallic Glasses**

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Poster session room

P-TR-MG-1a**Fast beta relaxation and structure relaxation by sub- T_g annealing in metallic glasses of different fragilities**Yuan Tan, Tomoki Hayashi, Hiroshi Tanimura, Norihiko L. Okamoto, Tetsu Ichitsubo**TR-DS****Anomalous Diffusion in Disordered Systems**

Mon. 14 August

Poster session room

P-TR-DS-1a**Anomalous Diffusion in Restricted Space Detected by Pulsed Field Gradient NMR:- Application to Porous Membrane for Lithium Ion Battery -**Junichi Kawamura, Reiji Takekawa

R-DD**Linear & Nonlinear Dielectric Dynamics**

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P-R-DD-1a**Dielectric α Relaxation of Sugar Alcohols**Yuima Kawatani, Ryusuke Nozaki**P-R-DD-2a****Effect of Intermolecular Hydrogen Bond on Relaxation Dynamics of Deep Eutectic Solvents Studied by Broadband Dielectric Spectroscopy from sub-GHz to THz Frequency Range**Yuto Awano, Lou serafin M Lozada, Keisuke Tominaga, Pratik Sen**P-R-DD-3a****New diffusion theory of molecular liquids based on the energy representation solution theory**Kazuya Okita, Kento Kasahara, Nobuyuki Matubayasi**P-R-DD-4a****Insights on rich dynamics in glass-formers by compositional changes and modifying thermodynamics**M. Shahin Thayyil, S. Capaccioli, Safna Hussan K.P., K.L. Ngai**R-PA****Physical Aging**

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P-R-PA-1b**Unexpected non-monotonic changing in the heterogeneity of glasses during annealing**Yu Tong, Fucheng Li, Lijian Song, Yanhui Liu, Juntao Huo, Jichao Qiao, Yao Yao, J.M. Pelletier, Daniel Crespo, Eloi Pineda, Jun-Qiang Wang**P-R-PA-2b****Experimental evidence of the Slow Arrhenius Process in small molecules**Federico Caporaletti, Simone Simon Napolitano**P-R-PA-3b****Role of molecular packing and confinement in glassy state properties of polymer brush films**Sneha Srinivasan, Quanyin Xu, Biao Zuo, Rodney D. Priestley

CG-CV**Crystallization vs. Vitrification**

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P-CG-CV-1a**Water dynamics in confinement at low temperatures**Yael Beilinson, Anna Greenbaum, Tatiana Antropova, Yuri Feldman**P-CG-CV-2a****Crystallization dynamics of deeply supercooled liquids**Yuki Takaha, Hideyuki Mizuno, Atsushi Ikeda**P-CG-CV-3a****Size Effect on Polymorph Selection in the Crystallization of Liquid Gallium**Jinyun Liu, Yuan-Chao Hu, Jie Shang, Run-Wei Li**P-CG-CV-4a****Computing coexistence lines by combining interface pinning and integration of the Clausius–Clapeyron identity**Ulf R. Pedersen**CG-LP****Liquid/Plastic Crystals**

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P-CG-LP-1a**The nature and pressure evolution of phase transitions in anti-dyskinetic medicine - amantadine**Ewa Ozimina-Kamińska, Paulina Jesionek, Barbara Hachuła, Karolina Jurkiewicz, Magdalena Tarnacka, Kamil Kamiński**P-CG-LP-2a****Phase transitions and dynamics of ionic liquid crystals in nanopores**Hiroki Nobori, Daisuke Fujimoto, Jun Yoshioka, Koji Fukao

TQ-LN**Advanced Light & Neutron Scattering**

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P-TQ-LN-1b**On the breakdown of the coincidence between 1st- and 2nd- order optical susceptibility below THz region**Yuko Amo, Anan Hisamiti, Takuya Oomura, Takeshi Usuki, Yasuo Kameda**P-TQ-LN-2b****Status of Neutron Spin Echo Spectrometers in Japan**Tatsuro Oda**TQ-IM****Information Science & Machine Learning**

Thu. 17 August

Poster session room

P-TQ-IM-1b**Intelligent polymer**Guoqiang Zhou**TQ-HP****High Pressure Studies**

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Poster session room

P-TQ-HP-1b**A Comparative Study of the Chemical Bonds of ZnO Rocksalt and Wurtzite types Under Extended Pressure and Temperature; a Molecular Dynamics prediction**Yahia Chergui, Nouredinne Elboughdiri, Djamel Ghernaout