

2024/12/2

9:30

Crystal Growth of ice

T. Ishizaki (Tohoku Univ. Art Design)
 T. Okada (Natl. Inst. Tech.,(kosen) Numazu College)
 T. Kumada (Japan Atomic Energy Agency)
 Yuheng Zhao (ILTS, Hokkaido Univ.)
 T. Mukaihara (Okayama Univ.)

Introduction**Chair: G. Sazaki (ILTS, Hokkaido Univ.)**

Evaluation of frost heave models by the experimental results
 Role of Methyl Groups in Ice Recrystallization Inhibition of Antifreeze Silver Nanoparticles
 Spin-contrast variation small-angle neutron scattering of nano-ice crystals in rapidly frozen sugar solutions
 Nitrogen gas suppresses the growth of elementary steps on ice crystal surfaces
 Can hydrogen-disordered ice grow from hydrogen-ordered ice?

9:45

10:15

10:45

short presentation
short presentation

11:15

11:35

11:55~13:15

Simulation

K. Ogata (Sanyo-Onoda City Univ.)
 T. Takayama (Saitama Univ.)

Lunch**Chair: K. Murata (ILTS, Hokkaido Univ.)**

Analysis of behavior of water molecules surrounding molecules in solution using MD simulation
 Development of TIP4P/2005-SHW and its application to vibrational spectroscopy

On Line

13:15

13:45

Cryobiology

K. Muramatsu (Japan Adv. Inst. Sci. Tech.)
 S. Matsuo (Hokkaido Univ.)
 T. Uchida (Hokkaido Univ.)

Molecular mechanisms of cryoprotective property of macromolecular cryoprotectants

14:15

Investigation of the mechanism of cell cryopreservation focusing on the permeability of cell membranes and the properties of cryoprotectants
 Cryopreservation of CHO-TRET1 cells using trehalose by Pressure Liquid Cooling Vitrification method

14:45

15:15

15:45~16:00

Clathrate Hydrates

Y. Mizutani (Kitami Inst. Tech.)
 S. Muromachi (Yokohama Natl. Univ.)
 T. Sugawara (Osaka Univ.)

Coffee Break**Chair: T. Uchida (Hokkaido Univ.)**

Effect of guest gas and cage size on stable isotope fractionation during gas hydrate formation
 Discovery of HS-I structure of clathrate hydrates
 Proton conduction in semi-clathrate hydrate single crystals

16:00

16:30

17:00

17:30~17:45

Posters (ON SITE only)

T. Uchida (Hokkaido Univ.)
 Y. Arai (Tokai Univ.)
 S. Higuchi (Tokai Univ.)
 H. Ito (Univ. Tokyo)
 H. Kobayashi (Univ. Tokyo)
 M. Satoh (Univ. Tokyo)
 S. Nozaki (ELSI, Sci. Tokyo)
 R. Nakabe (Japan Atomic Energy Agency)
 M. Inada (Univ. Tokyo)

Coffee Break and Poster preparation

Change of number density of UFB after freeze-thawing process
 Crystal Structure and Dynamics of Ice in Crystallized Polymer-Water Mixtures
 Ice Structure and Dielectric Relaxation in Aqueous Solutions of Crystallized Monosaccharides
 The pressure effect of the ordering of ice VI revealed by in-situ thermal analysis under high pressure
 How to certainly obtain lucky results
 Effect of water on melting point of ethanol of high pressure phase-II
 Incorporations of Ammonia into Methane Clathrate Hydrates in the Subsurface Ocean on Titan
 Nanostructure analysis of composite materials using spin-contrast variation small-angle neutron scattering -Case of ice crystals-
 In-situ Electrical Conductivity Measurement of $\text{H}_2\text{O}\cdot\text{NH}_3$ System

17:45~19:15

17:45~19:15

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17:45~19:15

19:30~

2024/12/3

Micro and Nano bubbles

Y. Maeda (Osaka Metro. Univ.)
 Nguyen Huynh Phuong Uyen (Osaka Metro. Univ.)
 N. Takenaka (Osaka Metro. Univ.)
 M. Tanigaki (Kyoto Univ.)

Chair: K. Nagashima (ILTS, Hokkaido Univ.)

Characteristics of DO and O₂-nanobubbles are same or different?
 A behavior of dissolved gases and gas-nanobubbles in water, alcohols and their mixtures
 Effect of ultra-fine bubble oxygen on some oxidation reactions in water
 Studies on Ultrafine Bubbles Using Radioactive Nuclei as Probes

9:30

10:00

10:30

11:00

11:30~11:45

High Pressure Ices

K. Sasaki (Tokai Univ.)
 K. Mochizuki (Zhejiang Univ., China)

Coffee Break**Chair: T. Uchida (Hokkaido Univ.)**

Hydrogen and oxygen isotopic effects on the molecular dynamics of high-density amorphous ice under high pressure
 Proton-ordered ice I does not collapse under compression

On Line

11:45

12:15

12:45

Conclusions and Remarks