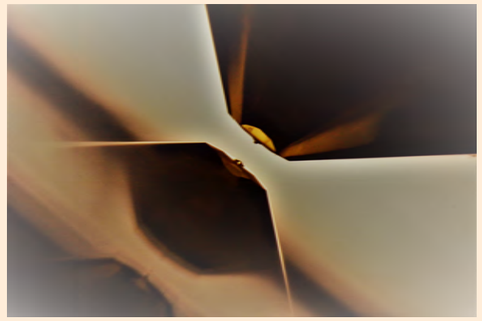
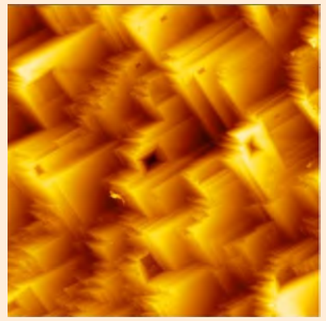
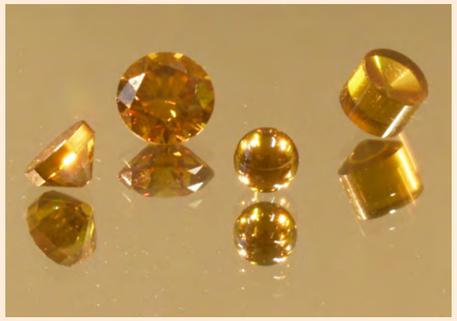
International symposium in Matsuyama on

Science and Technology of Nano-Polycrystalline Diamond

第 1 回国際ヒメダイヤシンポジウム in 松山 (2/28-3/2, 2019)







[28 February]

13:30-15:00 Synthesis of NPD and related materials

KEYNOTE: Tetsuo Irifune (GRC, Ehime Univ.)
"Synthesis, characterization, and application of NPD: An overview"

Masayuki Nishi (GRC, Ehime Univ.)
"Polycrystalline diamond sintered from ultradispersed nanodiamonds"

Nico A. Gaida (Fac. Eng., Nagoya Univ.)
"Transparent nanoceramics composed of birefringent crystals"

Norimasa Nishiyama (MSL, Tokyo Inst. Tech.)
"Fabrication of transparent polycrystalline cubic silicon nitride and its physical properties"

15:00-15:50 Break & Poster

15:50-17:40 Features and physical properties

KEYNOTE: Yanbin Wang (GSECARS, Univ. Chicago)
"The strength and plastic deformation of NPD"

Tsutomu Mashimo (Inst. Pulsed Power Sci., Kumamoto Univ.)
"Shock-compression behavior and strength of diamond"

Hiroaki Ohfuji (GRC, Ehime Univ.)
"Microstructure and crystallization mechanism of synthetic and natural NPDs"

Angelika Rosa (Mat. Extreme Cond., ESRF)
"NPD: a key device for high quality XAS at extreme P/T conditions"

Fumitaro Ishikawa (Fac. Eng. & GRC, Ehime Univ.)
"Impurity doping for electronic carrier control of diamond using high pressure and high temperature technique"

17:40-18:20 Lab tour

[1 March]

8:30-10:00 Applications to ultrahigh pressure generation

KEYNOTE: Takehiko Yagi (GCRC, Univ. Tokyo)
"Ultra-high pressure generation using double stage diamond anvil technique and the properties of nano polycrystalline diamond"

Takeshi Sakai (GRC, Ehime Univ.)
"Equations of state at multi-megabar pressure"

Katsuya Shimizu (KYOKUGEN, Osaka Univ.)
"Mbar-superconductivity and NPD"

Florent Occelli (CEA)
"A new diamond anvil tip geometry aimed at reaching multi-Mbar pressures"

10:30-12:00 Applications to X-ray spectroscopy under pressure

KEYNOTE: Max Wilke (Inst. Earth & Environ., Univ. Potsdam)
"Using Nanopolycrystalline Diamonds for EXAFS on glass and melt at extreme conditions"

Naoki Ishimatsu (Fac. Sci., Hiroshima Univ.)
"Element-selective local structure studied by X-ray absorption spectroscopy using NPD anvils"

Saori Kawaguchi (JASRI, SPring-8)
"Structure determination of liquid Fe-Ni-S alloys at high pressure"

Christele Sanloup (IMPMC, Sorbonne Univ.)
"Incorporation of trace elements in magmas at depth"

13:00-14:10 Applications to other high-pressure studies

KEYNOTE: Yoshihiko Takano (NIMS)
"Exploration of pressure induced superconductors using materials informatics"

Longjian Xie (BGI, Univ. Bayreuth)
"Boron-doped diamond in multi-anvil apparatus and its implication for in-situ falling sphere viscometry"

Hiroshi Fukui (Fac. Sci., Univ. Hyogo Pref.)
"NPD applied to X-ray Raman Scattering and suggestions to improve the usability"

14:10-15:00 Break & Poster

[2 March]

9:00-10:30 New ideas and other applications

KEYNOTE: Yoshio Kono (GRC, Ehime Univ.)
"Opposed-type double-stage cell for large volume experiments at >100 GPa and its potential use of NPD"

Guillaume Morard (CNRS)
"Pure iron phase diagram probed by multiple techniques"

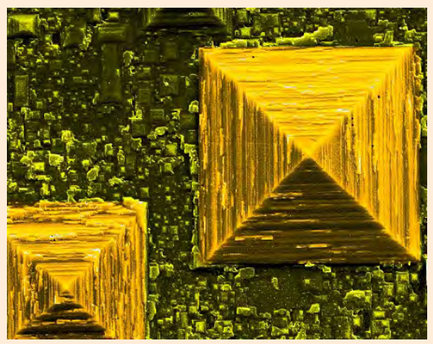
Norimasa Ozaki (Fac. Eng., Osaka Univ.)
"Study on shock-compressed nanopolycrystalline material"

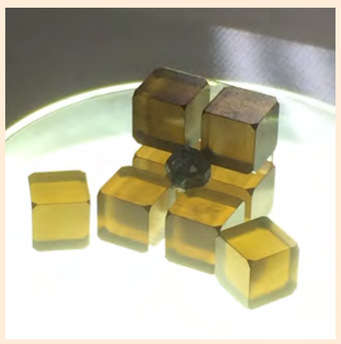
M. Satish-Kumar (Fac. Sci., Niigata Univ.)
"NPD as a carbon isotope standard for in situ analysis"

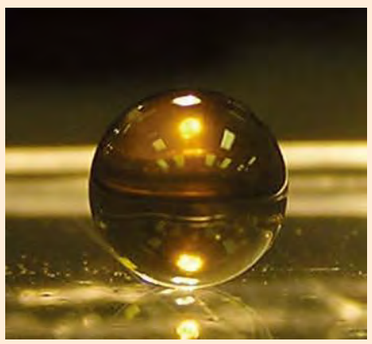
10:30-11:50 Discussion and future perspectives

KEYNOTE: Sakura Pascarelli (Mat. Extreme Cond., ESRF)
"Use of Nanopolycrystalline Diamond Anvils overseas: scientific impact, present status and future needs"

Discussion







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