The Joint 28th AIRAPT and 60th EHPRG International Conference 2023

Poster Presentations

Poster Session Tuesday 25 July

Poster Board No.	First Name	Last Name	Paper Title
1	David	Abbasi Pérez	Simulation of Pressure Effects on Small Molecules Confined inside Carbon Nanotubes Using Density Functional Theory and Machine Learning Potentials
2	Ran	Aharoni	High Pressure EOS and Phase Transition in the Pb-Sb Alloy System
3	Marie-pierre	Adam	Optical properties of SiV and GeV color centers in nanodiamonds under hydrostatic pressures up to 180 GPa
5	Sergejs	Afanasjevs	Extreme pressure-sensitivity of electrical resistivity in $Pt(bqd)^2$
7	Fernando	Aguado	Stability and High-Pressure behaviour of Paracetamol polymorphs through Raman spectroscopy
9	Frederico	Alabarse	Xpress beamline, Diffraction at Extreme Conditions – Elettra Sincrotrone Trieste
11	Monica	Amboage	Opportunities for high pressure research at beamline I18 of the Diamond Light Source
13	Shuto	Asano	High-pressure synthesis and characterization of NiAs-type novel manganese mononitride
15	Francesco	Belli	Impact of ionic quantum fluctuations on the thermodynamic stability and superconductivity of LaBH8
17	Shrikant	Bhat	Novel Material Synthesis @ Large Volume Press Beamline P61B PETRA III
19	Khachiwan	Buakor	In situ X-ray diffraction study of (Fe,Mg)O under shock compression
21	Maelie	Causse	Prediction and synthesis of polyhydrides in the Y-Fe-H system
23	Amrita	Chakraborti	Superhard boron carbide: New insights into anomalous dynamic failure and how to reinforce it
25	Chung Ching	Chang	High-pressure synthesis of multi-components (Cr1-x-yMnxVy)P4 phosphides
27	Jin-Ming	Chen	Sequential spin state transition and intermetallic charge transfer in PbCoO3 under high pressure
29	Leonardo	Chiappisi	The soft matter and chemistry support facilities at the Institut Laue-Langevin
31	Dimitrios	Christofilos	High pressure Raman study of ibuprofen
33	Lewis	Clough	The high pressure behaviour of Nd(XeF2)3(TaF6)3

35	Giuseppe	Cocomazzi	Investigating the melting temperature of silicates at extreme conditions using single pulse laser heating and time-resolved XRD
37	Cassandra	Dailledouze	Application of Quantum Diamond Magnetometry to High-Tc Cuprate Superconductivity
39	Begoña	De Ancos	High pressure-assisted extraction of phenolic compounds from mango by-products
41	Koen	De Hantsetters	Finite element analysis to extent Boehler-Almax anvils to ultra-large apertures
43	Viktoriia	Drushliak	Temperature and high-pressure studies of layered perovskite Cs[C(NH2)3]PbI4
45	Utpal	Dutta	High-Pressure Study of Electrical Transport Properties of VBr3 and CrBr3: Possible Pressure Induced Metallization
47	Matthias	Elender	Optical setup for fluorescence pressure measurements in piston-cylinder pressure cells with LED light source
49	Moran	Emuna	Effect of the incommensurate Bi-III phase on the Bi-Sb system under pressure
51	Alexis	Forestier	Superionicity of hot dense fcc ice evidenced by X-ray diffraction
53	Sven	Friedemann	Lifshitz transition at the onset of superconductivity in TiSe2
55	Sven	Friedemann	Clean-limit superconductivity in Hydrogen Sulphide H3S
57	Kazuhiro	Fuchizaki	Evaluation of a disposal type of 6–6 frame for high-pressure experiments
59	Satomi	Fujiwara	Raman study of supercritical fluid hydrogen coexisting with multilayer graphene at room temperature
61	Ken-ichi	Funakoshi	Structural changes in hydrous sodium silicate melts under high pressure
63	Samuel	Gallego Parra	Characterization of the ε'-Fe_2O_3 phase under extreme conditions
65	Tania	Garcia-Sanchez	High pressure study of PbGa2S4
67	Hélène	Ginestet	MHz X-Ray Diffraction and X-Ray-Heating in the Diamond Anvil Cell: a Metrology Study on Fe
69	Nico	Giordano	Second Order Phase Transition and Stabilizing CH···H and CH···S Interactions in Naphthyl End-Capped Bithiophene at 3.5 GPa
71	Benny	Glam	Phase transition and sound velocity study of shock loaded CaF2
73	Alexander F	Goncharov	Thermal conductivity of deep Earth minerals and alloys measured at extreme pressure-temperature conditions
75	Geethanjali	Gopakumar	MetalJet X-ray sources for Experiments at Non-ambient Pressures and Temperatures
77	Christophe	Guillaume	Triple Coil Setup for Studies of Magnetic Properties at High Pressure

79	Christophe	Guillaume	Innovative Design for Multimegabar Diamond Anvil Cell †
81	Xin	He	Superconductivity Observed in Tantalum Polyhydride at High Pressure
83	Antoine	Hilberer	Visible to mid-IR reflectivity of materials under extreme pressure
85	Jasmine	Hinton	Isothermal mode Gruneisen Tensor of Cadmium across electronic and structural phase boundaries
87	Mylaine	Holin	Analysis of ammonia-methane mixtures under high pressure and high temperature
89	Wilfried B	Holzapfel	Equation of State for Ice Ih with explicit contributions from proton-disorder and molecular defects
91	Shuhe	Hu	Pressure-Induced Emission Enhancement of π-conjugated Charge-Transfer Materials with Different Molecular Stacking
93	Agnieszka	Huć	Structural transformations of chevkinite group minerals
95	Osamu	Ikeda	Pressure-induced magnetic transition of ε-FeOOH at 8 GPa
97	Almudena	Inchausti Valles	New insights in chemical and mechanical effects in ru(ii)-ru(iii) bonds
99	Kunlang	Ji	High field neutron study and complex magnetic structures of the NTO-type solid solution Ni2-xCoxScSbO6
101	Changqing	Jin	Superconductivity above 80 K in Polyhydrides of Hafnium
103	Changqing	Jin	Superconductivity above 210 K Discovered in Superhydrides of Calcium
105	Yeonhak	Jung	Reaction between the feldspars and water in the Earth's transition zone
107	Konstantin	Kamenev	Use of novel composite materials in construction of non-metallic high-pressure cells
109	Mikołaj	Kamiński	Ni2+ broadband infrared emisison in varying temperature and pressure
111	Aigerim	Karina	Pressure dependence of dynamics in high-density amorphous ice
113	Jiří	Kaštil	Magnetic properties of layered van-der-Waals ferromagnets VI3 and CrI3 under high pressures
115	Michał	Kaźmierczak	Intermolecular interactions in multicomponent crystals under pressure: a study case of 1,2-bis(4-pyridyl)ethane and fumaric acid cocrystal
117	Rustem	Khasanov	Three-wall piston-cylinder type pressure cell for muon-spin rotation/relaxation experiments
119	Egor	Koemets	Chemical interactions of iron and methane at extreme conditions
121	Tetsuya	Komabayashi	Melting experiments of the system Fe-Si-O under high pressure with implications for the Earth's core

123	Petr	Král	Magnetism of geometrically frustrated Yb2Pt2Pb in elevated pressures
125	Joanna	Krzeszczakowska	Pressure-induced phase transitions and Equations of State for a luminescent arylacetylide-gold(I) compound.
127	Jorge	Laranjeira	Superconductivity in Novel Carbon Nanostructures
129	Eric	Lenhart	The thermal conductivity of liquid Fe-S-Si alloys at 2-5 GPa with implications for the dynamos of small outer Solar System planetary bodies
131	Tadeusz	Lesniewski	Evolution of the full energy structure of Mn4+ in fluoride phosphors under high pressure
133	Valery I	Levitas	Plastic strain-induced phase transformations in Si: drastic reduction of transformation pressures, change in transformation sequence, and size effect
135	Valery I	Levitas	Simulations of multivariant Si I to Si II phase transformation in polycrystalline silicon with finite-strain scale-free phase-field approach
137	Qingchen	Li	Correlation effects on the structure and stability of Nickel Oxides under pressure
139	Hanns-Peter	Liermann	Present and Future Extreme Conditions Research at Low (PETRA III) & Ultra-Low (PETRA IV) Emittance Synchrotron Sources at DESY
141	Fuyang	Liu	Green luminescence in heavily carbon doped GaN synthesized by atomic substitution under high pressure and high temperature
143	Jingyi	Liu	High-pressure Raman study of hcp metals Be, Os, and Re up to 200 GPa
145	Yuwei	Liu	High-pressure synthesis and study of structural and physical properties of Ba-based Ruddlesden-Popper 4d/5d transition metal oxides
147	Natalia	Majewska	Chemical and mechanical pressure influence on luminescence properties of near-infrared phosphors
149	Heehyeon	Sim	Hydration breakdown of serpentines along cold core geotherm
151	Mengnan	Wang	Revised Phase Diagram of CH4
153	Seohee	Yun	Super-hydration and reduction of manganese oxide minerals at shallow terrestrial depths
155	Martin	Demoucron	Innovative HPHT of new tennary compounds in the B-C-Si system

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4	Matthew	Clay	A new metastable state in the rare-earth hexaboride EuB_6 induced by high pressure
6	Mikhail	Kuzovnikov	Lattice dynamics and heat capacity of multilayer graphane
8	Valery I	Levitas	Tensorial stress-plastic strain fields in α - ω Zr mixture, transformation kinetics, and friction in diamond anvil cell
10	Valery I	Levitas	New rules for coupled severe plastic deformation, strain-induced phase transformations, and nanostructure evolution under high pressure
12	Edyta	Malinowska-Pańczyk	Hyperbaric storage of human milk at subzero temperature – impact on microbiota, leukocytes and basic nutrients
14	Tomas	Marqueno	Metallic hydroxides within the Earth's deep water cycle
16	Philipp	May	Equation of state and diamond formation kinetics of C-H-O mixtures under ice giant interior conditions
18	Malcolm	McMahon	Are You Using The Wrong EoS In Dioptas?
20	Martin	Míšek	High pressure study of the van-der-Waals ferromagnet CrBr3
22	Katharina	Mohrbach	Thermal conductivity of H2O ice VII from X-ray heating experiments at the European XFEL
24	Virginia	Monteseguro	Crystal-field mediated electronic transitions of EuX monochalcogenides (X = O, S, Se and Te) up to 35 GPs
26	Yoshihisa	Mori	Development of a high-pressure cell for SPS equipment
28	Hermann	Muhammad	Melting curve of black phosphorus and associated colossal volume jump
30	Alfonso	Muñoz	ScAlO3 perovskite under high pressure from first principles simulations.
32	Yuki	Nakamoto	Crystal structure and superconductivity of alkaline earth metal Strontium at low temperature and high pressure
34	Satoshi	Nakano	High-pressure/high-temperature phase diagram of BaH_2 and the formation of barium polyhydride
36	Lucie	Nataf	XAS and XMCD under extreme conditions at the ODE beamline – SOLEIL Synchrotron
38	Ayako	Ohmura	The effect of pressure on superconductivity in AuxPd1-xTe2

40	Vitaly	Paris	Sound velocity, second shock velocity and off-Hugoniot measurements of lead compressed up to 83 GPa
42	Lea	Pennacchioni	Crystal structure and high-pressure phase behavior of a CaCO3-SrCO3 solid solution
44	Ana Carmen	Perdigón Aller	High-pressure structural stability and luminescence studies of nanoclays for environmental applications
46	Juan	Pintor	Phase transitions and electronic properties of Fe2O3 under laser compression by ultrafast in-situ X-ray absorption spectroscopy
48	Christian	Plueckthun	Combining high-pressure and low temperature with single crystal resonant x-ray diffraction, p09, petra iii
50	Aleksandra	Półrolniczak	Pressure-induced sorption in Cd(oba)(azpy) metal-organic framework in liquid and gaseous environment
52	Tomasz	Poreba	Pressure-tuned blue-to-orange light emission in polymorphic diphenylmaleic anhydride
54	Michael	Pravica	Studies of PFOA at extreme conditions
56	Clemens	Prescher	Investigating the iron phase diagram utilizing MHz diffraction at the European X-ray free electron laser
58	John	Proctor	Modelling of liquid internal energy and heat capacity over a wide pressure-temperature range from first principles
60	John	Proctor	Phase diagram of ethane to 450 K and 120 GPa
62	John	Proctor	Raman scattering study of liquid and solid propane to 60 GPa at 300 K
64	Benjamin	Pullicino	High-Pressure/High-Temperature Synthesis and Crystal Structure of two new Zinc Oxotellurate(VI) Compounds
66	Divyanshu	Ranjan	Characterising C-H demixing and Hydrogen metallization in Warm Dense Matter conditions
68	J. Manuel	Recio	On the high-pressure phase of 1T-HfSe2
70	Lukasz	Rogal	Transmission electron microstructure studies of Ti40Zr20Nb20Hf5Ta15 high entropy alloy after laser-heated diamond anvil cell experiments
72	Javier	Ruiz-fuertes	High-pressure phase of Iridium-based Sr2BIrO6 (B = Ca, Zn) Double Perovskites
74	Takeshi	Sakai	Equations of state of metals (Fe, Mo, Cu, W, Re, Pt, Au) and magnesium oxide (MgO) at multi-megabar pressure
76	Juan Ángel	Sans	Synchrotron-based structural characterization of Sr2FeIrO6 under high pressure

78	Misaki	Sasaki	Search for Superconductivity of Layered Iron Superhydrides Synthesized under High Temperature and High Pressure
80	Haritha	Sasidharan Vanaja	High-pressure structural study of CeAl2
82	Gordon	Scholz	Probing iron's spin state in FeS at conditions of the Martian core
84	Hicham	Moutaabbid	Superhard boron phosphide designed in the Paris Edinburgh press
86	Gregory Alexander	Smith	Stoichiometric Determination of Clathrate-like Yttrium Hydride under Megabar Conditions
88	Yang	Song	Spacer Dependent and Pressure Tuned Structures and Optoelectronic Properties of 2D Hybrid Halide Perovskite
90	Altair	Soria Pereira	In situ and ex situ studies of silicate glasses and glass-ceramics under high pressure
92	James	Spender	High-Pressure Investigation of the I-N Sytem
94	Darko	Stojkovski	High-pressure and low-temperature studies of guanidinium iodobismuthate(III)
96	Marek	Szafrański	All-Inorganic Perovskites CsPbBr3 and CsPbCl3 under High Pressure
98	Masashi	Tanaka	High-Pressure Effect on EuNi2As2
100	Minxue	Tang	In situ X-ray diffraction of the α-ε phase transition in iron at intermediate strain rates
102	Evgeny	Tararushkin	Classical atomistic simulations of the 10Å phase at high temperatures and pressures
104	Tobias A.	Teichtmeister	Pr3Mo4B6O24(OH)3: High-Pressure/High-Temperature Synthesis of an Acentric Rare Earth Molybdenum Borate
106	Nicola	Thiering	In situ study of Fe2O3 at pressure and temperature conditions of the Earth’s lower mantle
108	William	Thomas	High-pressure magnetic measurements of β-phase UH3
110	Pierre	Toulemonde	High pressure crystal structure study of non superconducting Ln4Ni3O8 and (Ln1-xAx)NiO2 layered bulk nickelates (Ln = La, Pr, Nd ; A = Sr, Ca)
112	Kazunori	Umeo	Pressure Effects on the Specific Heat of the Thermoelectric Compound InTe
114	Erik	Uran	Hydrostatic behaviour of selected chemically inert pressure-transmitting media
116	Mercedes	Vasquez	Composition and pressure effects on thermal conductivity of terrestrial planetary cores: Canyon Diablo iron meteorite as a natural analog
118	Sergio	Villa-cortes	The Isotope Effect and Critical Magnetic Fields of Superconducting YH$_{6}$: A Migdal-Eliashberg Theory Approach

120	Duojun	Wang	Electrical conductivity of clinochlore at high-pressure and temperature
122	Qinyan	Wang	Hornblende Crystal Populations of Appinites from the Jiagou Mesozoic Intrusion, Southeastern Margin of the North China Craton, and their Genetic Implications
124	Marisa	Wood	Sound velocities in the Lunar Mantle
126	Fang	Xu	TiC-MgO composite: an X-ray transparent and machinable heating element for the multi-anvil high-pressure apparatus
128	Keishiro	Yamashita	Development of conical diamond anvil cell for single-crystal neutron diffraction under high pressure
130	Daisuke	Yamazaki	Electrical resistance of Fe2O3 at high pressure
132	Jiafeng	Yan	Synthesis and Structural Study of Lanthanum Aluminum Hydrides under High Pressure
134	Yansun	Yao	Machine Learning Accelerated Simulation of Solid-Solid Phase Transitions under High Pressure
136	Akira	Yoshiasa	Single crystal structure refinements and Debye temperatures of kashinite-bowieite (Ir2S3-Rh2S3) and erlichmanite-laurite (OsS2-RuS2) solid-solutions
138	Zena	Younes	Thermal conductivity of deep earth minerals using high pressure-temperature time-resolved powder X-ray diffraction at European XFEL.
140	Shuhua	Yuan	Negative linear compressibility in Se under pressure
142	Enrique	Zanardi	Phosphorus dimerization in GaP under high pressure
144	Andreas	Zerr	Elastic moduli, anisotropy and refractive index of γ-Ge_3N_4 via laser ultrasonics, Brillouin light scattering, and first-principles calculations
146	Changling	Zhang	Record High Tc Element Superconductivity in Titanium at High Pressure
148	Jianfa	Zhao	Superconductivity in Zirconium Polyhydrides with Tc above 70 K
150	Yongsheng	Zhao	Temperature and pressure-dependent incommensurate to commensurate on NbSe3
152	Xin	Zhong	Prediction of Above-Room-Temperature Superconductivity in Lanthanide/Actinide Extreme Superhydrides
154	Raimund	Ziegler	Synthesis and crystal structure of the zinc borate Zn3B4O9