# PROGRAM

# OVERVIEW

**AIRAPT 26**
**Joint with ACHPR 8 and CHPC 19**

| Time | Aug. 18 (Fri) | Aug. 19 (Sat) | Aug. 20 (Sun) | Aug. 21 (Mon) | Aug. 22 (Tue) | Aug. 23 (Wed) | Aug. 24 (Thu) |
|---|---|---|---|---|---|---|---|
| | | On Site Registration | On Site Registration | On Site Registration | On Site Registration | On Site Registration | Excursion<br>Academic Tour to HPSTAR Beijing Lab |
| 8:30 | | Plenary Talk | Plenary Talks | BA Promotion<br>Plenary Talk | Plenary Talks | Parallel Sessions | |
| | | Group Photo<br>Coffee Break | Coffee Break | Coffee Break | Coffee Break | Coffee Break | |
| | | Parallel Sessions | Parallel Sessions | Parallel Sessions | Parallel Sessions | Parallel Sessions | |
| | On Site Registration<br>CNCC (C3 Entrance)<br>(12:00--20:00) | Lunch | Lunch | Lunch | Lunch | Lunch | |
| 13:30 | | Parallel Sessions | Poster Session | Parallel Sessions | Parallel Sessions | ACHPR Plenary Talk<br>ACHPR Promotion<br>CHPC Awards Promotion | |
| | | Coffee Break | Coffee Break | Coffee Break | Coffee Break | Coffee Break | |
| | | Parallel Sessions | Parallel Sessions | Parallel Sessions | Parallel Sessions | Plenary Talks<br>Jamieson Award Talk<br>AIRAPT Announcements<br>Conference Promotion | |
| 18:30 | Welcome Reception | AIRAPT Executive Committee Meeting<br>CHPC Committee Meeting | ACHPR Committee Meeting<br>HIBEF User Meeting | Banquet | AIRAPT GA Meeting | Closing Ceremony | |

# DETAILS OF PROGRAM

| August 19th 2017 (Sat) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| AM I<br>Ballroom A<br>Chair: C. Q. Jin | 9:00 | Welcome Address | | | | | | |
| | 9:30 | H. K. Mao | | | | | | |
| | 10:10 | **Group Photo** / Coffee break | | | | | | |
| AM II | | Ballroom A | 202A+B | 203A | 203B | 205A | 205B | 206A+B |
| | Chairs | **Wenli Bi** | **O. Andersson** | **Weiqiang Yu** | **S. P. Pang<br>M. Bykov** | **Bin Chen<br>K. Umemoto** | **Y. Uwatoko<br>Zhidan Zeng** | **Shengnian Luo** |
| | 10:50 | J. S. Tse | R. Bini | S. Bud'ko | C. S. Yoo | Yanbin Wang | J. S. Zhou | E. Zaretsky |
| | 11:05 | | | | | | | |
| | 11:20 | J. F. Lin | Haiyan Zheng | A. Saminathan | T. Strobel | T. Kovalenko | K. Khishchenko | Jitang Fan |
| | 11:35 | S. K. Lee | Kuo Bao | J. A. L. Jimenez | | Xiaokang Feng | Shourui Li | Xiaohu Yao |
| | 11:50 | | Xin Tian | Yanpeng Qi | S. Duwal | Xin Yin | L. Henry | Xiaojiang Long |
| | 12:05 | N. Hiraoka | Xilian Jin | Yuhui Dong | Xiangting Ren | Wen Yue | Haifeng Liu | Xiaoyang Pei |
| | 12:20 | Lunch Break | | | | | | |
| PM I | Chairs | | **Yang Ding** | **E. Saitovitch** | **Guangjin Chen** | **Yuchang Wang<br>S. Muraoka** | **K. NIWA** | **Xiaoyi Liu** |
| | 13:30 | | B. Lebert | Wei Ku | Jijun Zhao | Duanwei He | Bo Zou | Anmin He |
| | 13:45 | | | | | | | |
| | 14:00 | | Bijuan Chen | Weiqiang Yu | U. Pinsook | M. Araki | Jinguang Cheng | Wurong Jian |
| | 14:15 | | M. Stekiel | K. Matsuura | | Fuyang Liu | | Jin Cai |
| | 14:30 | | | M.Kamitani | Liuxiang Yang | Jin Liu | Dongbo Zhang | Heng-An Wu |
| | 14:45 | | The Anh Le | M.Krishnan | Xiaoyu Sun | Yinjuan Liu | Lin Zhang | Zhaodong Feng |
| | 15:00 | Coffee Break | | | | | | |
| PM II | Chairs | | **J. S. Tse<br>Jiyong Zhao** | **K. Matsuura<br>Hongbo Wang** | **B. Winkler** | **Yansun Yao** | **Dongbo Zhang<br>A. S. Pereira** | **Zhebin Wang** |
| | 15:30 | | Jiyong Zhao | S. Watanabe | Y. Vohra | A. Oganov | V. Brazhkin | Mianzhen Mo |
| | 15:45 | | J. W. Hong | | | | | |
| | 16:00 | | Yuming Xiao | J. Gochi | M. Bykov | Guodong (David) Zhan | L. Nataf | F. Coppari |
| | 16:15 | | | M. Guerette | Arpita A.A. Nirupama | | J. Kearney | |
| | 16:30 | | Wenli Bi | Xiao Wang | Fangfei Li | Xiaohui Yu | M. Ward | Juncheng E |
| | 16:45 | | Youjun Zhang | Chaoqun Jiang | N. N. Patel | Mingqi Yan | K. NIWA | Hang Zhang |
| | 17:00 | | Wei Xu | Long Zhou | Li Lei | Qiang Tao | Dezhong Meng | Xinglong Gong |
| | 18:30 | AIRAPT Executive Committee Meeting<br>HPCP Committee Meeting | | | | | | |

| August 20th 2017 (Sun) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| AM-I Ballroom A Chair:Y. S. Zhao | 8:30 | R. Ahuja | | | | | | |
| | 9:10 | J. Eggert | | | | | | |
| | 9:50 | Coffee break | | | | | | |
| AM II | | Ballroom A | 202A+B | 203A | 203B | 205A | 205B | 206A+B |
| | Chairs | **S. Redfern Haoxiang Jin** | **Yang Song** | **Baosheng Li R. Sadykov** | **Tian Cui S. Duwal** | **A. Oganov** | **Jiyong Zhao** | **Lei Lu** |
| | 10:20 | Yusheng Zhao | Guoqiang Yang | A. Belonoshko | K. Shimizu | M. Hasegawa | Zexiang Shen | T. C. Tschentscher |
| | 10:35 | | | | | | | |
| | 10:50 | C. Tulk | R. V. Conceicao | W. P. Hsieh | W. Nellis | Benyuan Cheng | S. Ishiwata | K. Appel |
| | 11:05 | | | | Lin Wang | Dongli Zou | | |
| | 11:20 | Leiming Fang | Qiaoshi Zeng | Xinyang Li | Huayun Geng | Hao Yan | Juan Xia | Sen Chen |
| | 11:35 | Jinchen Wang | Yang Zhang | Yongtao Zou | J. Y. Kim | | Jiaxu Yan | Minxue Tang |
| | 11:50 | Lunch Break | | | | | | |
| PM I | Chairs | | | | | | | |
| | 13:30 | Poster Session | | | | | | |
| | 15:30 | Coffee Break | | | | | | |
| PM II | Chairs | | **Zhisheng Zhao** | **Haijun Huang R. Nomura** | **W. Nellis Qiaoshi Zeng** | **E. Pace Yuming Xiao** | **Y. W. Long** | **Jianfeng Li** |
| | 16:00 | | V. Solozhenko | Jiuhua Chen | R. Howie | F. Rodriguez | Y. Uwatoko | T. E. Cowan |
| | 16:15 | | | | | | | |
| | 16:30 | | Mingguang Yao | Zhu Mao | P. Loubeyre | Jirui Deng | Jinlong Zhu | Zhebin Wang |
| | 16:45 | | Zhidan Zeng | | Panpan Kong | Partha P. Das | | |
| | 17:00 | | Kun Luo | M. Ruf | Mari Einaga | S. Samanta | Tingting Yin | Quanxi Xue |
| | 17:15 | | Linyan Wang | Dapeng Yang | T. Ishikawa | Yiwei Sun | K. Oka | Xuping Zhang |
| | 17:30 | | Bowen Cai | Yunfei Duan | Yansun Yao | Bo Wang | M. Paramonov | Jing Li |
| | 17:45 | | Hongbo Lou | Ningyu Sun | Tao Sun | Hongshan Deng | Min Zhang | |
| | 18:30 | ACHPR Committee Meeting<br>HIBEF User Meeting | | | | | | |

| August 21st 2017 (Mon) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| AM I<br>Ballroom A<br>Chair: H. Z. Liu | 8:30 | M. Eremets | | | | | | |
| | 9:10 | E. Gregoryanz | | | | | | |
| | 9:50 | Coffee break | | | | | | |
| AM II | | Ballroom A | 202A+B | 203A | 203B | 205A | 205B | 206A+B |
| | Chairs | **H. K. Mao** | **Bo Xu<br>S. Kawaguchi** | **F. Honda<br>D. Kraus** | **A. Goncharov<br>Liuxiang Yang** | **Yanbin Wang** | **B. Sundqvist<br>Zhicheng Jing** | **Juncheng E** |
| | 10:20 | I. Silvera | A. Soldatov | T. Tsuchiya | N. Holtgrewe | Baosheng Li | C. Sanloup | Shengnian Luo |
| | 10:35 | | | | | | | |
| | 10:50 | P. Loubeyre | Qianqian Wang | Li Zhang | R. Sadykov | K. Leinenweber | Qingyang Hu | D. Eakins |
| | 11:05 | | C. R. Lecuna | Mingqiang Hou | Hengzhong Zhang | D.Yamazaki | | |
| | 11:20 | In-Depth Discussion | Zhisheng Zhao | Fei Qin | E. Pace | | R. Nomura | Huaming Hou |
| | 11:35 | | Yang Lu | Shengxuan Huang | T. Shigematsu | T. Sakai | Miao Zhang | Junyu Huang |
| | 11:50 | Lunch Break | | | | | | |
| PM I | Chairs | | **G. Y. Shen** | **R. Howie** | **M. Hanfland** | **Huiqiu Yuan<br>V. Potapkin** | **V. N. Robinson<br>M. G.Yao** | **Zizheng Gong** |
| | 13:30 | | H. K. Mao | Xiaodi Liu | D. Haskel | M. Nicklas | D. Kraus | P. Hazell |
| | 13:45 | | | | | | Lin Li | |
| | 14:00 | | F. Datchi | V. Afonina | M. Tkacz | Xin Lu | H. S. Yuan | Jianbo Hu |
| | 14:15 | | | G. Ackland | | | Meiling Jin | |
| | 14:30 | | Yu Ye | | R. Turnbull | K. H. Chu | Yating Jia | Bixiong Bie |
| | 14:45 | | | B. Steele | Jianping Sun | Jing Song | R. Caracas | Lin Wang |
| | 15:00 | | T. Mashimo | | Lei Su | Bin Shen | | Zhengye Zhong |
| | 15:15 | Coffee Break | | | | | | |
| PM II | Chairs | | **T. Tsuchiya** | **Liping Wang** | **G. Ackland<br>Bingbing Liu** | **K. Syassen<br>Fusheng Liu** | **Li Zhang** | **Sen Chen** |
| | 15:45 | | I. Silvera | J. Hamlin | O.Andersson | Y. Fomin | T. Katsura | Guiji Wang |
| | 16:00 | | | | | | | |
| | 16:15 | | E. Gregoryanz | Zhenxian Liu | Bin Chen | R. Hrubiak | Nan Zhang | Xiaoxi Duan |
| | 16:30 | | A. Goncharov | | | Lei Liu | S. Arumugam | Chengjun Li |
| | 16:45 | | K. Syassen | Yanwei Huang | Huiyang Gou | Shi-Kai Xiang | E. Takahashi | Xiaojuan Ma |
| | 17:00 | | | Junliang Zhang | | Chan Gao | Ming Zhang | Haiwei Chai |
| | 17:15 | | Discussion | Haoxiang Jin | Cancan Shao | Binqian Luo | Yuanyuan Jiao | |
| Ballroom A | Banquet<br>(18:30-20:30) | | | | | | | |

| August 22nd 2017 (Tue) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| AM I<br>Ballroom A<br>Chair: J. H. Chen | 8:30 | T. Irifune | | | | | | |
| | 9:10 | Y. J. Tian | | | | | | |
| | 9:50 | Coffee break | | | | | | |
| AM II | | Ballroom A | 202A+B | 203A | 203B | 205A | 205B | 206A+B |
| | Chairs | **Yue Meng<br>H. P. Liermann** | **Lin Wang** | **P. Levashov** | **T. Strobel** | **Jinfu Shu<br>Panpan Kong** | **M. Guerette<br>Xiaohui Yu** | **Anmin He** |
| | 10:20 | G. Y. Shen | Yining Huang | E. Ohtani | Maosheng Miao | V. Levitas | B. Winkler | I. Oleynik |
| | 10:35 | | | | | | | |
| | 10:50 | S. Pascarelli | M. Santoro | Yingwei Fei | Y. J. Lee | Yang Zhao | T. Yamanaka | Yang Cai |
| | 11:05 | | Mihye Kong | | | Dongxiao Liu | F. Honda | |
| | 11:20 | | J. Choi | Haijun Huang | B. Sundqvist | N. Salke | S. Pandolfi | Xiaoyi Liu |
| | 11:35 | | Yilong Pan | Zhicheng Jing | V. N. Robinson | Liping Wang | Y. M. Lee | Tao Chong |
| | 11:50 | Lunch Break | | | | | | |
| PM I | Chairs | | **D. Haskel<br>N. Hirao** | **Heping Li** | **A. Saminathan<br>M. Santoro** | **T. Matsuoka<br>D. Minakov** | **T. Yamanaka<br>Haiyan Zheng** | **Zhengye Zhong** |
| | 13:30 | | T. Yoshino | Xiang Wu | Yang Song | M. Grosche | Yanming Ma | Pengwan Chen |
| | 13:45 | | | Yu Ye | | | | |
| | 14:00 | | Yijin Liu | Yonggang Liu | Kuo Li | S. Deemyad | A. Belik | Meilan Qi |
| | 14:15 | | M. Mezouar | Dawei Fan | | | | Qiang Zhou |
| | 14:30 | | Tony Yu | Jiaji Jin | S. Ovsyannikov | Jie Fu | Hongbo Wang | Bo Li |
| | 14:45 | | N. Ishimatsu | Wangsheng Qian | A. S. Pereira | Haiyan Lu | J. Binns | Siyi Wu |
| | 15:00 | | R. Hrubiak | Jikai Zhang | S. Redfern | Guicun Ma | Bosen Wang | Jun Zhu |
| | 15:15 | Coffee Break | | | | | | |
| PM II | Chairs | | **S. Pascarelli<br>Y. J. Lee** | **Shenghua Mei** | **Guangfu Ji<br>Kuo Bao** | **Yingwei Fei** | **J. Y. Kim** | **Wurong Jian** |
| | 15:45 | | Wenge Yang | Xi Liu | F. Datchi | T. Iitaka | L. Ehm | J. P. Escobedo-Diaz |
| | 16:00 | | | | | | | |
| | 16:15 | | H. P. Liermann | Xianlong Wang | Yan Bi | Zhipeng Gao | Runze Yu | Lei Lu |
| | 16:30 | | | Lei Liu | | | | Duan Fan |
| | 16:45 | | D. Smith | Xingcheng Liu | Hao Su | Xiuru Liu | V. Turkevich | Chao Li |
| | 17:00 | | M. Hanfland | Lei Wu | S. Desgreniers | Min Wu | Zilong Xu | Shijia Ye |
| | 17:15 | | N. Hirao | Jingui Xu | I. Danilov | Xiao Tan | Yunyu Yin | Xiaochang Tang |
| | 17:30 | | | Yukai Zhuang | Jun Zhang | D. Minakov | O. Kurakevych | |
| | 17:45 | | | Jinfu Shu | Guoqiang Zhao | Zhenhai Yu | Yinghua Li | |
| | 18:30 | AIRAPT GA Meeting | | | | | | |

**August 23rd 2017 (Wed)**

| | | 202A+B | 203A | 203B | 205A | 205B | 206A+B |
|---|---|---|---|---|---|---|---|
| AM I | Chairs | **Yanming Ma** | **Xi Liu** | **J. Nelson** | **K. Khishchenko Yongtao Zou** | **O. Kurakevych V. Turkevich** | **Jianbo Hu** |
| | 8:30 | A. Bergara | Baohua Zhang | Bingbing Liu | Zhaohui Zhang | T. Taniguchi | Qi An |
| | 8:45 | | Feiwu Zhang | | | | |
| | 9:00 | Quan Li | Shuangmeng Zhai | A. Lobato | Shengyi Xie | C. Thomas | Xianming Zhou |
| | 9:15 | Feng Peng | Wen Liang | D. S. Kim | P. Levashov | | Fusheng Liu |
| | 9:30 | K.Umemoto | Yichuan Wang | R. Martonak | Jinyuan Yan | S. Muraoka | Tang Cheng |
| | 9:45 | Yunwei Zhang | Kaixiang Liu | Yuanchao Gan | Qiyue Hou | Jianhong Dai | Qiancheng Liu |
| | 10:00 | Coffee Break | | | | | |
| AM II | Chairs | **D. S. Kim Quan Li** | **Yongsheng Zhou** | **A. Lobato Dawei Fan** | **L. Nataf Min Zhang** | **Xiang Wu** | **Shuangmeng Zhai** |
| | 10:30 | C. Pickard | Lidong Dai | R. Cohen | Hongliang He | Shenghua Mei | Yonghao Han |
| | 10:45 | | | | | | Hong Liu |
| | 11:00 | J. Nelson | Liwei Deng | Jian Sun | Zheng Deng | Yongsheng Zhou | Li Zhou |
| | 11:15 | Xiaowei Liang | Haiying Hu | | | Wei Du | Sen Lin |
| | 11:30 | Ying Sun | Yu He | T. C. Germann | Haiwa Zhang | Zhongying Mi | Haotian Jiang |
| | 11:45 | Zhi Li | Xuan Guo | S. Khambholja | S. Kawaguchi | Huihui Zhang | Pan Wang |
| | 12:00 | | Wenqing Sun | Lipeng Cao | V. Potapkin | Guinan Zhang | Ping Li |
| | 12:15 | | Sibo Chen | | | | Luying Wang |
| | 12:15 | Lunch Break | | | | | |
| PM I Ballroom A Chair: | 13:30 | ACHPR Plenary Talk: Tian Cui | | | | | |
| | 14:10 | ACHPR Poster Awards | | | | | |
| | 14:30 | CHPC Young Scientist Awards | | | | | |
| | 14:50 | ACHPR 9 Promotion<br>CHPC 20 Promotion | | | | | |
| | 15:30 | Coffee Break | | | | | |
| PM II Ballroom A Chair: F. Rodriguez | 15:50 | Plenary Talk: John Parise | | | | | |
| | 16:30 | Jamieson Award Talk: Philip Dalladay-Simpson | | | | | |
| | 17:10 | AIRAPT Committee Announcement | | | | | |
| | 17:20 | AIRAPT 27 Conference Promotion | | | | | |
| | 17:30 | Closing Remark：Haozhe Liu | | | | | |

# ORAL

| | August 19th 2017 (Sat) |
|---|---|
| | Registration |
| 9:00 | Welcome - Ballroom A |
| 9:30 | PLENARY TALK - Ballroom A<br>**Ho-Kwang MAO**<br>**Solids and liquids under high pressure** - p. 103<br><br>Chair: Changqing Jin |
| 10:10 | Group Photo<br>Coffee Break |
| | Ballroom A |
| Chair | Wenli Bi |
| 10:50 | John Tse<br><br>[K1]-High pressure spin-transitions in Greigite ($Fe_3S_4$) - p.117 |
| 11:15 | Jung-Fu Lin<br><br>[I1]-Revealing iron isotopic fractionation in earth's lower mantle and core by inelastic x-ray scattering - p.140 |
| 11:40 | Sung Keun Lee<br><br>[I2]-Structure of crystalline and amorphous oxides at mega-bar pressure condition: insights from x-ray raman scattering - p.141 |
| 12:05 | Nozomu Hiraoka<br><br>[I3]-High pressure studies at SPring-8 Taiwan beamlines - p.142 |
| 12:20 | Lunch Break |

| August 19th 2017 (Sat) | | |
|---|---|---|
| Registration | | 8:00 |
| Welcome - Ballroom A | | 9:00 |
| PLENARY TALK - Ballroom A<br>**Ho-Kwang MAO**<br>**Solids and liquids under high pressure** - p. 103<br><br>Chair: Changqing Jin | | 9:30 |
| Coffee Break | | 10:10 |
| 202A+B | 203A | Room |
| Ove Andersson | Weiqiang Yu | Chair |
| Roberto Bini<br><br>[I4]-The chemistry of molecules under pressure - p.143 | Sergey Bud'ko<br><br>[I5]-Effect of pressure in novel superconductors: from pnictides to topological semimetals - p.144 | 10:50 |
| Haiyan Zheng<br><br>[O1]-From molecules to materials: the pressure induced polymerization of organic small molecules - p.259 | Abhirami Saminathan<br><br>[O5] - Pressure Induced Superconductivity in $Bi_2Se_{1.2}Te_{1.8}$ Topological Insulator - p.263 | 11:20 |
| Kuo Bao<br><br>[O2]-Boron concentration drive boron substructure and physical properties amongst Manganese Borides - p.260 | Julio Antonio Larrea Jimenez<br><br>[O6]-Detaching the electron localization from nontrivial topology in Kondo - p.264 | 11:35 |
| Xin Tian<br><br>[O3]-Growth of 3-dimensional polyaniline@helical carbon nanotube composites and their electromagnetic absorbing properties - p.261 | Yanpeng Qi<br><br>[O7]-Topological quantum phase transition and superconductivity induced by pressure in the bismuth tellurohalide BiTeI - p.265 | 11:50 |
| Xilian Jin<br><br>[O4]-Crossover from metal to insulator in dense lithium-rich compound $CLi_4$ - p. 262 | Yuhui Dong<br><br>[O141]- High energy photon source: a high-performance synchrotron light source for high pressure sciences - p. 399 | 12:05 |
| Lunch Break | | 12:20 |

| | August 19th 2017 (Sat) | |
|---|---|---|
| 8:00 | Registration | |
| 9:00 | Welcome - Ballroom A | |
| 9:30 | PLENARY TALK - Ballroom A<br>**Ho-Kwang MAO**<br>**Solids and liquids under high pressure** - p. 103<br><br>Chair: Changqing Jin | |
| 10:10 | Coffee break | |
| Room | 203B | 205A |
| Chair | Siping Pang<br>Maxim Bykov | Bin Chen<br>Koichiro Umemoto |
| 10:50 | Choong-Shik Yoo<br><br>[K2]-New states of matter and chemistry at extreme pressures - p.118 | Yanbin Wang<br><br>[I7]-High pressure plastic deformation of polycrystalline diamonds: strength and deformation mechanisms - p.146 |
| 11:20 | Timothy Strobel<br><br>[I6]-High-energy precursor pathways to new materials - p.145 | Tetiana Kovalenko<br><br>[O11]-Change of the thermodynamic activity of growth system components as a factor determining the diamond crystals type at HPHT crystallization - p.269 |
| 11:35 | | Xiaokang Feng<br><br>[O12]-Compressed and XPS-T study of non-softening bulk modulus of CrN - p.270 |
| 11:50 | Sakun Duwal<br><br>[O9] - Phase diagram of $D_2S$ and the correlation between dense $H_2S$, $(H_2S)_2H_2$ and $H_3S$, and their sensitivities to photochemistry - p.267 | Xin Yin<br><br>[O13]-Optimization design of PDC bit - p.271 |
| 12:05 | Xiangting Ren<br><br>[O10] - Pressure-induced isostructural phase transition in Hexagonal Selenium - p.268 | Wen Yue<br><br>[O14]-Thermal stability of ultrahard polycrystalline diamond composite materials - p.272 |
| 12:20 | Lunch Break | |

| | August 19th 2017 (Sat) | | | |
|---|---|---|---|---|
| 8:00 | Registration | | | 8:00 |
| 9:00 | Welcome: Ballroom A | | | 9:00 |
| 9:30 | PLENARY TALK - Ballroom A<br>**Ho-Kwang MAO**<br>**Solids and liquids under high pressure** - p. 103<br><br>Chair: Changqing Jin | | | 9:30 |
| 10:10 | Coffee break | | | 10:10 |
| Room | 205B | | 206A+B | Room |
| Chair | Yoshiya Uwatoko<br>Zhidan Zeng | | Shengnian Luo | Chair |
| 10:50 | Jianshi Zhou<br><br>[K3]-A systematic study of anomalous bulk modulus in perovskite oxides - p.119 | | Eugene Zaretsky<br><br>[I8]-The effect of crystal structure on regime of decay of elastic precursor wave in pure metals - p.147 | 10:50 |
| 11:20 | Konstantin Khishchenko<br><br>[O15]-Equations of state and phase transformations of silicon and germanium at high pressures and temperatures - p.273 | | Jitang Fan<br><br>[O19]-High-rate squeezing process of bulk metallic glasses - p.277 | 11:15 |
| 11:35 | Shourui Li<br><br>[O16]-Structural properties of energetic compound TATB under static high pressure - p.274 | | Xiaohu Yao<br><br>[O20]-Structural evolution in $Cu_{46}Zr_{54}$ metallic glasses under shock loading - p.278 | 11:30 |
| 11:50 | Laura Henry<br><br>[O17]-Structural Evolution of Liquid Sulfur under Pressure - p.275 | | Xiaojiang Long<br><br>[O22]-Shock response of Cu/graphene nanolayered composites - p.280 | 11:45 |
| 12:05 | Haifeng Liu<br><br>[O18]-Validation for equation of state of Tantalum in wide regime - p.276 | | Xiaoyang Pei<br><br>[O21]-Scale analysis of damage evolution in incipient spall of OFHC under plate impact - p.279 | 12:00 |
| 12:20 | Lunch Break | | | 12:20 |

| | August 19th 2017 (Sat) |
|---|---|
| Room | 202A+B |
| Chair | Yang Ding |
| 13:30 | BlairLebert<br><br>[I9]-Discovery of new high pressure magnetic phases in Fe and FeSe using x-ray emission spectroscopy - p.148 |
| 13:55 | BijuanChen<br><br>[I10]-Probing the quantum state of 4f electrons at high pressure using inelastic x-ray Scattering - p.149 |
| 14:20 | Michal Stekiel<br><br>[I11]-High pressure elasticity of $FeCO_3$-$MgCO_3$ carbonates - p.150 |
| 14:45 | The Anh Le<br><br>[I12]-Ab-initio study of structural parameters and electronic properties of epsilon phase of solid Oxygen: the effects of van der Waals correction, exchange functionals and Hubbard term correction - p.151 |
| 15:00 | Coffee Break |

| August 19th 2017 (Sat) | |
|---|---|
| 203A | Room |
| Elisa Maria Baggio Saitovitch | Chair |
| Wei Ku<br><br>[I13]-Unusually stronger quantum fluctuation with larger spins: Novel phenomena revealed by emergent magnetism in pressurized high-temperature superconductor FeSe - p.152 | 13:30 |
| Weiqiang Yu<br><br>[O23]-High-pressure NMR studies on strongly correlated electron systems - p.281 | 14:00 |
| Kohei Matsuura<br><br>[O24]-High-pressure electronic phase diagrams in $FeSe_{1-x}S_x$ superconductors - p.282 | 14:15 |
| Manabu Kamitani<br><br>[O25]-Superconductivity at the polar-nonpolar phase boundary of SnP with an unusual valence state - p.283 | 14:30 |
| ManikandanKrishnan<br><br>[O26]-Hydrostatic pressure and magnetic field effect on $Cr_{0.0005}NbSe_2$ single crystal - p.284 | 14:45 |
| Coffee Break | 15:00 |

| | August 19th 2017 (Sat) | |
|---|---|---|
| Room | 203B | 205A |
| Chair | Guangjin Chen | YuchangWang<br>Shu Muraoka |
| 13:30 | Jijun Zhao<br><br>[I14]-Phase diagram of water ice under negative pressure: discovery of new clathrate phases with ultralow density - p.153 | Duanwei He<br><br>[K4]-Novel superhard materials in light element system – p.120 |
| 14:00 | Udomsilp Pinsook<br><br>[I15]-Theoretical investigation of $CH_3NH_3PbI_3$ perovskite under pressure - p.154 | Masatada Araki<br><br>[O29]- Effect of the of cobalt content on the wear behaviour of sintered diamond cutting tools - p. 287 |
| 14:15 | | Fuyang Liu<br><br>[O30]-Structural study of low-compressible noble-metal oxides $OsO_2$ and $PtO_2$ under high pressure - p. 288 |
| 14:30 | Liuxiang Yang<br><br>[O27]- Electrical resistivity of iron in diamond anvil cell - p. 285 | Jin Liu<br><br>[O31]-Effect of different indenter hardness on measurement of material hardness - p. 289 |
| 14:45 | Xiaoyu Sun<br><br>[O28]-Raman study of structural change in 1,3,5-triamino-2,4,6-trinitrobenzene under non-hydrostatic and hydrostatic pressure environment-p.286 | Yinjuan Liu<br><br>[O32]- High pressure infiltration sintering and performance of cBN-Si composites - p. 290 |
| 15:00 | Coffee Break | |

| | August 19th 2017 (Tue) | | | |
|---|---|---|---|---|
| Room | 205B | | 206A+B | Room |
| Chair | Ken NIWA | | Xiaoyi Liu | Chair |
| 13:30 | Bo Zou<br><br>[I16]-Pressure-induced structural and optical properties of halide perovskites - p. 155 | | Anmin He<br><br>[I18]-Total amount and size distribution of ejecta produced from surface perturbation of metals under shock wave loading - p.157 | 13:30 |
| 14:00 | Jinguang Cheng<br><br>[I17]-Pressure-induced emergence of high-Tc superconductivity in FeSe-based materials - p.156 | | Wurong Jian<br><br>[O35]-Shock-induced melting of open-cell nanoporous Cu foams: Effects of porosity and specific surface area - p.293 | 13:55 |
| 14:15 | | | Jin Cai<br><br>[O36]-Heterogeneous crystal nucleation in Lennard-Jones liquid under different loading paths - p.294 | 14:10 |
| 14:30 | Dong-Bo Zhang<br><br>[O33]- Phonon quasiparticles from first-principles: a case study of beryllium under extreme conditions - p. 291 | | Heng-An Wu<br><br>[O37]-Tensile strength of liquids: equivalence of temporal and spatial scales in cavitation - p.295 | 14:25 |
| 14:45 | Lin Zhang<br><br>[O34]- Two techniques on SGII high-power laser facility for the diagnosis of the fragmentation of laser-shocked target - p. 292 | | Zhaodong Feng<br><br>[O38]-Origin of compression-induced failure in PMMA under shock loading - p.296 | 14:40 |
| 15:00 | Coffee Break | | | 14:55 |

| | August 19th 2017 (Sat) |
|---|---|
| Room | 202A+B |
| Chair | John Tse<br>Jiyong Zhao |
| 15:30 | Jiyong Zhao<br><br>[I19]-Applications of the nuclear resonant scattering on high pressure research at 3ID, APS - p.158 |
| 15:55 | Jiawang Hong<br><br>[I20]-Anharmonic lattice dynamics and elasticity of metals and energy materials - p.159 |
| 16:20 | Yuming Xiao<br><br>[I21]-Nuclear resonant and inelastic x-ray scattering under high pressure at HPCAT - p.160 |
| 16:45 | Wenli Bi<br><br>[I22]-Studies of pressure-induced magnetic and valence transitions in $EuFe_2As_2$ via synchrotron Mössbauer spectroscopy - p.161 |
| 17:10 | Youjun Zhang<br><br>[I23]-Lattice dynamics in Ta at high pressure-p.162 |
| 17:35 | Wei Xu<br><br>[I24]-Nuclear resonant scattering and inelastic x-ray scattering program at high energy photon source in Beijing - p.163 |

| August 19th 2017 (Sat) | |
|---|---|
| 203A | Room |
| Kohei Matsuura<br>Hongbo Wang | Chair |
| Shinji Watanabe<br><br>[I25]-Universality of quantum criticality in Yb-based heavy fermions on quasicrystal and pressurized approximant crystal - p.164 | 15:30 |
| Jun Gochi<br><br>[O39]-Pressure effect on the ferromagnetic compound $CeAgAl_3$ - p.297 | 16:00 |
| Michael Guerette<br><br>[O40]-Advanced synthesis and properties of $Si_{24}$ - p.298 | 16:15 |
| Xiao Wang<br><br>[O41]-A-site controlled high-temperature ferrimagnetic semiconductivity and half-metallicity in $ACu_3Fe_2Os_2O_{12}$ (A = Na, Ca, La) - p.299 | 16:30 |
| Chaoqun Jiang<br><br>[O42]-Real-time optical absorption spectra of V centers in deformed MgO - p.300 | 16:45 |
| Long Zhou<br><br>[O43]-Investigation of Multiferroicity in a Cubic Perovskite LaMn3Cr4O12 - p.301 | 17:00 |

| | August 19th 2017 (Sat) | |
|---|---|---|
| Room | 203B | 205A |
| Chair | Bjoern Winkler | Yansun Yao |
| 15:30 | Yogesh Vohra<br>[K5]-Chemical vapor deposited nanocrystalline diamond micro-anvils for study on materials under extreme conditions- p.121 | Artem Oganov<br><br>[K6]-Novel chemical phenomena at extreme conditions: results of structure prediction algorithm USPEX - p.122 |
| 16:00 | Maxim Bykov<br><br>[O44]-Novel iron nitrides synthesized in laser-heated diamond anvil cells- p.302 | Guodong (David) Zhan<br><br>[I26]-Applications of diamond in new energy - p.165 |
| 16:15 | Arpita A. A. Nirupama<br><br>[O45]-High pressure synthesis of novel manganese carbide- p.303 | |
| 16:30 | Fangfei Li<br><br>[O46]-Correlatively dependent lattice and electronic structural evolutions in compressed monolayer tungsten disulfide- p.304 | Xiaohui Yu<br><br>[O49]-Ultrastrong boron frameworks in $ZrB_{12}$: a highway for electron conducting - p.307 |
| 16:45 | Nishant N. Patel<br><br>[O47]-K-Br system under pressure: synthesis of unconventional stoichiometric compounds - p.305 | Mingqi Yan<br><br>[O50]-Origin of hardness enhancement in CrN - p.308 |
| 17:00 | Li Lei<br><br>[O48]- Neutron diffraction study of ε-$Fe_3N_{1.098}$ and ε-$Fe_{2.322}Co_{0.678}N_{0.888}$ - p. 306 | Qiang Tao<br><br>[O51]-Study the origin of twin boundary in nanotwinned diamond synthesized by different carbon onion precursor - p.309 |

| | August 19th 2017 (Sat) | | |
|---|---|---|---|
| Room | 205B | 206A+B | Room |
| Chair | Dongbo Zhang<br>Altair Soria Pereira | Zhebin Wang | Chair |
| 15:30 | Vadim Brazhkin<br><br>[I27]- High-pressure synthesis of bulk graphanes from aromatic hydrocarbons- p.166 | Mianzhen Mo<br><br>[I28]-Ultrafast visualization of structural phase transition in warm dense matter - p.167 | 15:30 |
| 16:00 | Lucie Nataf<br><br>[O52]-Rare earth hexaborides investigated through XAS and XMCD - p.310 | Federica Coppari<br><br>[I29]-EXAFS measurements to study material properties during laser-driven dynamic compression at the Omega and NIF laser facilities - p.168 | 15:55 |
| 16:15 | John Kearney<br><br>[O53]-Unexpected structural and electronic behavior in $Sn_3N_4$ - p.311 | | |
| 16:30 | Matthew Ward<br><br>[O54]-High pressure synthesis of $C_2H_2{\cdot}C_6H_6$ cocrystals and polymerization to a nanocrystalline carbon-rich extended solid - p.312 | Juncheng E<br><br>[O57]-GPU-accelerated single-shot X-ray diffraction simulations for large nanoparticle system - p.315 | 16:20 |
| 16:45 | Ken Niwa<br><br>[O55]-Novel group-14 element nitrides synthesized at high pressure - p.313 | Hang Zhang<br><br>[O58]-Ultrafast evolution of shock wave induced by femtosecond laser ablation of aluminum - p.316 | 16:35 |
| 17:00 | Dezhong Meng<br><br>[O56]-Superconductivity of hydrogen-rich metal hydride under high pressure - p.314 | Xinglong Gong<br><br>[O59]-Ductile fracture of bulk metallic glass $Zr_{50}Cu_{40}Al_{10}$ under high strain-rate loading - p.317 | 16:50 |

| | August 20th 2017 (Sun) |
|---|---|
| 8:00 | Registration |
| 8:30 | PLENARY TALK – Ballroom A<br>**Rajeev AHUJA**<br><br>**Exploring materials through advanced computational materials science** - p.104<br>Chair: Yusheng Zhao |
| 9:10 | PLENARY TALK – Ballroom A<br>**Jon EGGERT**<br><br>**Progress in laser-driven compression experiments** – p.106<br>Chair: Yusheng Zhao |
| 9:50 | Coffee break |
| Room | Ballroom A |
| Chair | Simon. Redfern<br>Haoxiang Jin |
| 10:20 | Yusheng Zhao<br><br>[K7]-High-pressure neutron diffraction studies for energy materials- p.123 |
| 10:50 | Christopher Tulk<br><br>[I30]-The status and scientific examples of high pressure neutron scattering at the spallation neutron source-oak ridge national laboratory- p.169 |
| 11:20 | Leiming Fang<br><br>[O60]-Developments of high pressure neutron diffraction study at CMRR- p. 318 |
| 11:35 | Jinchen Wang<br><br>[O61]-Pressure effects on different types of improper ferroelectric materials: $(Mn,Co)WO_4$ and $Ca_3Mn_2O_7$, studied via single crystal neutron diffraction- p.319 |
| 11:50 | Lunch Break |

| August 20th 2017 (Sun) | | |
|---|---|---|
| Registration | | 8:00 |
| PLENARY TALK – Ballroom A<br>**Rajeev AHUJA**<br><br>**Exploring materials through advanced computational materials science** - p.104<br>Chair: Yusheng Zhao | | 8:30 |
| PLENARY TALK – Ballroom A<br>**Jon EGGERT**<br><br>**Progress in laser-driven compression experiments** – p.106<br>Chair: Yusheng Zhao | | 9:10 |
| Coffee break | | 9:50 |
| 202A+B | 203A | Room |
| Yang Song | Baosheng Li<br>R. Sadykov | Chair |
| Guoqiang Yang<br><br>[K8]-Controlled formation and properties of metastable materials using dynamic diamond anvil cell- p. 124 | Anatoly Belonoshko<br><br>[I79]- Mechanism of the body-centered cubic iron stabilization under the earth core conditions - p.218 | 10:20 |
| Rommulo Vieira Conceicao<br><br>[I31]-Potassium, nitrogen and water recycling in Earth: implication for the Earth internal heating and the maintenance of life on Earth. - p. 170 | Wen-Pin Hsieh<br><br>[I32]-Thermal conductivity of deep earth materials- p. 171 | 10:50 |
| Qiaoshi Zeng<br><br>[O62]-Polymorphism in a high-entropy alloy- p. 320 | Xinyang Li<br><br>[O64]-High pressure stability of $CaCO_3$ - p. 322 | 11:20 |
| Yang Zhang<br><br>[O63]-Preparation of pure α″-phase Titanium alloys with low moduli via high pressure solution treatment- p. 321 | Yongtao Zou<br><br>[O65]-Acoustic velocities, structural stability and elasticity of materials at high pressure: ultrasonic measurements and X-ray study- p. 323 | 11:35 |
| Lunch Break | | 11:50 |

| | August 20th 2017 (Sun) | |
|---|---|---|
| 8:00 | Registration | |
| 8:30 | PLENARY TALK – Ballroom A<br>**Rajeev AHUJA**<br><br>**Exploring materials through advanced computational materials science** - p.104<br>Chair: Yusheng Zhao | |
| 9:10 | PLENARY TALK – Ballroom A<br>**Jon EGGERT**<br><br>**Progress in laser-driven compression experiments** – p.106<br>Chair: Yusheng Zhao | |
| 9:50 | Coffee break | |
| Room | 203B | 205A |
| Chair | Tian Cui<br>Sakun. Duwal | Artem. Oganov<br>Zhi Li |
| 10:20 | Katsuya Shimizu<br><br>[K10]-Search for pressure-induced superconductivity in other hydrides - p. 126 | Masashi Hasegawa<br><br>[I33]-Novel chemical reactions for material synthesis and crystal growth in diamond anvil cell- p. 172 |
| 10:50 | William Nellis<br><br>[O66]- Metastable dense hydrogenous materials: possible scientific and technological applications - p. 324 | Benyuan Cheng<br><br>[O70]-Pressure-induced metallization and amorphization in $VO_2$(A) nanorods - p. 328 |
| 11:05 | Lin Wang<br><br>[O67]-Dehydrogenation through pressure-induced polymerization processes of $PH_3$ - p. 325 | Dongli Zou<br><br>[O71]-Mixed microstructure of nanometer and ultrafine grains in adiabatic shear bands in zirconium alloy under dynamic deformation- p.329 |
| 11:20 | Huayun Geng<br><br>[O68]- Melting and phase diagram of dense hydrogen under ultra-high compression - p. 326 | Hao Yan<br><br>[O73]-Superlattice formation and phase transition of monodisperse gold nanoparticles- p. 331 |
| 11:35 | Jaeyong Kim<br><br>[O69]-Hydrogen storage of TiZrNi quasicrytals under high pressure - p. 327 | |
| 11:50 | Lunch Break | |

| | August 20th 2017 (Sun) | | | |
|---|---|---|---|---|
| 8:00 | Registration | | | 8:00 |
| 8:30 | PLENARY TALK – Ballroom A<br>**Rajeev AHUJA**<br><br>**Exploring materials through advanced computational materials science** - p.104<br>Chair: Yusheng Zhao | | | 8:30 |
| 9:10 | PLENARY TALK – Ballroom A<br>**Jon EGGERT**<br><br>**Progress in laser-driven compression experiments** – p.106<br>Chair: Yusheng Zhao | | | 9:10 |
| 9:50 | Coffee break | | | 9:50 |
| Room | 205B | | 206A+B | |
| Chair | Jiyong Zhao | | Lei Lu | Chair |
| 10:20 | Zexiang Shen<br><br>[K11]-Pressure engineering the properties of hybrid perovskites- p. 173 | | Thomas C. Tschentscher<br><br>[I35]-New science avenues opened by hard x-ray free-electron lasers - p. 174 | 10:20 |
| 10:50 | Shintaro Ishiwata<br><br>[I34]-High pressure synthesis of novel perovskite-type 3d-transition-metal oxides with unusual structure-property relationship-p.173 | | Karen Appel<br><br>[I36]-The high-energy density science instrument at european XFEL: an upcoming facility for studies of matter at extreme conditions - p. 175 | 10:45 |
| 11:20 | Juan Xia<br><br>[O74]-Electronic/optoelectronic property tuning in two-dimensional transition metal dichalcogenides via high pressure —p.332 | | Sen Chen<br><br>[O76]-SLADS: a parallel code for direct simulations of scattering of large anisotropic dense nanoparticle systems - p. 334 | 11:10 |
| 11:35 | Jiaxu Yan<br><br>[O75]-High Pressure Response in 3D $MAPbBr_3$ Perovskites: Bulk and Nanocrystals - p.333 | | Minxue Tang<br><br>[O77]-Loading-path dependent deformation of nanocrystalline Ta under single- and double-shock, and quasi-isentropic compression - p.335 | 11:25 |
| 11:50 | Lunch Break | | | 11:50 |

| | August 20th 2017 (Sun) |
|---|---|
| Chair | Tony Yu Xiancheng Wang |
| 13:30 | Poster Session |
| 15:30 | Coffee Break |
| Room | 202A+B |
| Chair | Zhisheng Zhao |
| 16:00 | Vladimir Solozhenko<br><br>[I37]-High-pressure synthesis of advanced materials in the B - X systems (X = N, P, Si) - p. 176 |
| 16:30 | Mingguang Yao<br><br>[O78]-New carbon phases from compressing confined fullerene systems - p.336 |
| 16:45 | Zhidan Zeng<br>[O79]-Synthesis of quenchable amorphous diamond under HPHT-p.337 |
| 17:00 | Kun Luo<br><br>[O80]-Nanotwinned cubic boron nitride synthesized from large-diameter onion-like boron nitride - p. 338 |
| 17:15 | Linyan Wang<br><br>[O81]-First-principle study on crystal structures and electronic properties of beryllium carbides at high pressure - p. 339 |
| 17:30 | Bowen Cai<br><br>[O82]-High pressure synthesis and thermoelectric properties of sodium doped polycrystalline SnSe - p. 340 |
| 17:45 | Hongbo Lou<br><br>[O83]-Two-direction tuning of order in a metallic glass - p.341 |

| | August 20th 2017 (Sun) |
|---|---|
| Chair | Tony Yu Xiancheng Wang |
| 13:30 | Poster Session |
| 15:30 | Coffee Break |
| Room | 203A |
| Chair | Haijun Huang<br>R. Nomura |
| 16:00 | Jiuhua Chen<br><br>[K12]- Water influence on the equation of state of pyrope - p. 128 |
| 16:30 | Zhu Mao<br><br>[I38]-Density and bulk sound velocity profiles of the bottom lower mantle-p.177 |
| 17:00 | Michael Ruf<br><br>[O84]-Getting the most out of your high pressure experiments! - p.342 |
| 17:15 | Dapeng Yang<br>[O85]-Elasticity of superhydrous phase B at the mantle temperature and pressure: Implications for 800-km discontinuity and water flow into lower mantle- p.343 |
| 17:30 | Yunfei Duan<br><br>[O86]-Single-crystal elasticity of $MgAl_2O_4$-spinel up to 10.4 GPa and 1000 K by brillouin scattering- p.344 |
| 17:45 | Ningyu Sun<br><br>[O87]-The phase boundary of $CaCl_2$-phase type $SiO_2$ and its equations of state - p.345 |

| | August 20th 2017 (Sun) | |
|---|---|---|
| Chair | Tony Yu Xiancheng Wang | |
| 13:30 | Poster Session | |
| 15:30 | Coffee Break | |
| Room | 203B | 205A |
| Chair | William. Nellis<br>Qiaoshi Zeng | Edward. Pace<br>Yuming Xiao |
| 16:00 | Ross Howie<br><br>[I39]-Novel hydrogen halide compounds at high pressure - p. 178 | Fernando Rodriguez<br><br>[I40]-Gold nanorod solutions under pressure: influence on surface plasmon resonance. - p. 179 |
| 16:30 | Paul Loubeyre<br><br>[O88]-Formation of superhydrides by direct reaction of hydrogen on elements in the 100 GPa range: beginning of a screening and emerging questions- p.346 | Jirui Deng<br><br>[O94]-Fabrication of $LaGdZr_2O_7$ transparent nanoceramic under high-presure - p.352 |
| 16:45 | Panpan Kong<br><br>[O89]- Pressure-induced superconductivity above 79 K in $Si_2H_6$- p.347 | Partha Pratim Das<br><br>[O95]-Influence of native defects of ZnO rods and flowers on the pressure-induced structural transformations and phase evolution- p. 353 |
| 17:00 | Mari Einaga<br><br>[O90]-Formation process of high-tc phase of sulfur hydride - p.348 | Sudeshna Samanta<br><br>[O96]-Coupling between the electrical conductivity and nanocrystalline structures in a single nanowire under high pressure- p. 354 |
| 17:15 | Takahiro Ishikawa<br><br>[O91]-Phase stability and superconductivity of argon-hydrogen compounds - p.349 | Yiwei Sun<br><br>[O97]-Graphite under compression: shift of layer breathing and shear modes frequencies with interlayer spacing- 355 |
| 17:30 | Yansun Yao<br><br>[O92]-New structure of hydrogen sulfide ($H_2S$) under pressure - p.350 | Bo Wang<br><br>[O98]-Stress wave with phase transition under combined compression-shear loading- p. 356 |
| 17:45 | Tao Sun<br><br>[O93]-Lattice Thermal Conductivity of $MgSiO_3$ Perovskite from First Principles- 351 | Hongshan Deng<br><br>[O99]- A novel pressure-induced transition in Spin-Orbital compound GaTa4Se8 - p.357 |

| | August 20th 2017 (Sun) | | | |
|---|---|---|---|---|
| Chair | Tony Yu Xiancheng Wang | | | Chair |
| 13:30 | Poster Session | | | 13:30 |
| 15:30 | Coffee break | | | 15:30 |
| Room | 205B | | 206A+B | Room |
| Chair | Youwen. Long | | Jianfeng Li | Chair |
| 16:00 | Yoshiya Uwatoko<br><br>[I41]- Development of cubic anvil type high pressure apparatus for neutron diffraction - p.180 | | Thomas Edward Cowan<br><br>[I43]-HIBEF at European XFEL: Probing laser-driven extreme states of matter- p.182 | 16:00 |
| 16:30 | Jinlong Zhu<br><br>[I42]-Pressure-induced reversal between thermal contraction and expansion in ferroelectric $PbTiO_3$ - p.181 | | Zhebin Wang<br><br>[I44]-Indirectly laser-driven Hugoniot experimental study of iron over TPa on SG laser facility - p.183 | 16:25 |
| 17:00 | Tingting Yin<br><br>[O100] - High Pressure Response in 2D Alkylammonium Lead Iodide Perovskites- p.358 | | Quanxi Xue<br><br>[O104]-Study on laser driven ramp compression- p.362 | 16:50 |
| 17:15 | Kengo Oka<br><br>[O101]-Metallic conductivity and magnetic property in the high-pressure cubic phase of $PbVO_3$- p.359 | | Xuping Zhang<br><br>[O105]-The compressibility measurement of fluid acetone using magnetically driven shock compression- p.363 | 17:05 |
| 17:30 | Mikhail Paramonov<br><br>[O102]-Reconstruction of release isentropes based on quantum molecular dynamics simulations- p.360 | | Jing Li<br><br>[O106]-Characteristics of X-Pinch x-ray sources and their applications in diffracting and imaging studies- 364 | 17:20 |
| 17:45 | Min Zhang<br><br>[O103]-Observation of topological phase transitions of 1T-$TiTe_2$ under hydrostatic pressure by anomalistic Raman signal- p.361 | | | |

| | August 21st 2017 (Mon) |
|---|---|
| 8:00 | Registration |
| 8:30 | AWARD TALK - Ballroom A<br>**Mikhail EREMETS**<br><br>**Development of physical and chemical studies at static pressures up to 500 GPa**<br>- p.113<br>Chair: Haozhe Liu |
| 9:10 | PLENARY TALK - Ballroom A<br>**Eugene GREGORYANZ**<br><br>**Phase diagram of hydrogen** - p. 107<br>Chair: Haozhe Liu |
| 9:50 | Coffee break |
| | Ballroom A |
| Chair | Ho-kwang Mao |
| 10:20 | Isaac Silvera<br><br>[K13]-Metallic hydrogen- p.129 |
| 10:50 | Paul Loubeyre<br><br>[K14]-Formation of superhydrides by direct reaction of hydrogen on elements in the 100 GPa range: beginning of a screening and emerging questions - p.130 |
| 11:20 | In-depth Discussion |
| 11:50 | Lunch Break |

| August 21st 2017 (Mon) | | |
|---|---|---|
| Registration | | 8:00 |
| AWARD TALK - Ballroom A<br>**Mikhail EREMETS**<br><br>**Development of physical and chemical studies at static pressures up to 500 GPa**<br>- p.113<br>Chair: Haozhe Liu | | 8:30 |
| PLENARY TALK - Ballroom A<br>**Eugene GREGORYANZ**<br><br>**Phase diagram of hydrogen** - p. 107<br>Chair: Haozhe Liu | | 9:10 |
| Coffee break | | 9:50 |
| 202A+B | 203A | Room |
| Bo Xu<br>Saori Kawaguchi | Fuminori Honda<br>Dominik Kraus | Chair |
| Alexander Soldatov<br><br>[I45]-Carbon nanotubes under shock compression - p.184 | Taku Tsuchiya<br><br>[I46]-Theoretical mineral physics for mantle science - p.185 | 10:20 |
| Qianqian Wang<br><br>[O107]- Properties modulation of $C_3N_4$ by P doping and amorphization - p.365 | Li Zhang<br><br>[O111]-Ultradense hydrous (Fe,Al)OOH and a wet deep lower mantle - 369 | 10:50 |
| Carlos Renero-Lecuna<br><br>[O108]-High pressure synthesis in Na-Si system by in situ methods0 - p.366 | Mingqiang Hou<br><br>[O112]- Temperature-induced reversible aragonite-amorphization transition in $CaCO_3$ - p.370 | 11:05 |
| Zhisheng Zhao<br><br>[O109]-Ultrastrong, hard, and elastic compressed glassy carbon - p.367 | Fei Qin<br><br>[O113]- Thermal equation of state of natural Ti-clinohumite - p.371 | 11:20 |
| Yang lu<br><br>[O110]-Structural evolution and optoelectronic properties of $A_3BX_4$-type compounds under high pressure - p.368 | Shengxuan Huang<br><br>[O114]- Pressure-induced structural and spin transitions of $Fe_3S_4$ - p.372 | 11:35 |
| Lunch Break | | 11:50 |

| | August 21st 2017 (Mon) | | | |
|---|---|---|---|---|
| 8:00 | Registration | | | 8:00 |
| 8:30 | AWARD TALK - Ballroom A<br>**Mikhail EREMETS**<br><br>**Development of physical and chemical studies at static pressures up to 500 GPa** - p.113<br>Chair: Haozhe Liu | | | 8:30 |
| 9:10 | PLENARY TALK - Ballroom A<br>**Eugene GREGORYANZ**<br><br>**Phase diagram of hydrogen** - p. 107<br>Chair: Haozhe Liu | | | 9:10 |
| 9:50 | Coffee break | | | 9:50 |
| Room | 203B | | 205A | Room |
| Chair | Alexander Goncharov<br>Liuxiang Yang | | Yanbin Wang | Chair |
| 10:20 | Nicholas Holtgrewe<br><br>[I47]-Pulsed laser techniques for time domain spectroscopy in laser heated diamond anvil cells at extreme pressures and temperatures - p. 186 | | Baosheng Li<br><br>[I48]-Primary and secondary pressure scales from combined ultrasonic and X-ray diffraction studies - p. 187 | 10:20 |
| 10:50 | Ravil Sadykov<br><br>[O115]- Nonmagnetic high pressure clamp cells for neutron scattering at low temperature and high magnetic fields - p.373 | | Kurt Leinenweber<br><br>[I49]-Development of $SiO_2$ saturation in $GeO_2$ (rutile type) as a precise high-temperature pressure calibrant from 4 to 10 GPa - p.188 | 10:45 |
| 11:05 | Hengzhong Zhang<br><br>[O116]- Effects of Size, Doping and Pressure on Far-Infrared Spectra of Titania Crystals - p.374 | | | |
| 11:20 | Edward Pace<br><br>[O117]- Synthesis and high-pressure raman studies of sulphur hydride - p.375 | | Daisuke Yamazaki<br><br>[I50]- High pressure generation in a Kawai-type multianvil apparatus equipped with sintered diamond anvil - p.189 | 11:10 |
| 11:35 | Toru Shigematsu<br><br>[O118]- The restricted energy metabolism of a Saccharomyces cerevisiae piezosensitive mutant as suggested by metabolomics approach - p.376 | | Takeshi Sakai<br><br>[I51]-Keane equation of state of MgO, $MgSiO_3$ and the pressure scale materials - p.190 | 11:35 |
| 11:50 | Lunch Break | | | 11:50 |

| | August 21st 2017 (Mon) | | | |
|---|---|---|---|---|
| 8:00 | Registration | | | 8:00 |
| 8:30 | AWARD TALK - Ballroom A<br>**Mikhail EREMETS**<br><br>**Development of physical and chemical studies at static pressures up to 500 GPa** - p.113<br>Chair: Haozhe Liu | | | 8:30 |
| 9:10 | PLENARY TALK - Ballroom A<br>**Eugene GREGORYANZ**<br><br>**Phase diagram of hydrogen** - p.107<br>Chair: Haozhe Liu | | | 9:10 |
| 9:50 | Coffee break | | | 9:50 |
| Room | 205B | | 206A+B | Room |
| Chair | Bertil Sundqvist<br>Zhicheng Jing | | Juncheng E | Chair |
| 10:20 | Chrystele Sanloup<br><br>[I52]- Early silicate Earth's differentiation - p.191 | | Shengnian Luo<br><br>[I54]-Probe materials dynamics at multiscales: experiments and simulations - p.193 | 10:20 |
| 10:50 | Qingyang Hu<br><br>[I53]- Formation of FeO2 at high pressure and its implication in Earth's elemental cycling - p.192 | | Daniel Eakins<br><br>[I55]- Towards dynamic X-ray imaging of the mesoscale during hypervelocity impact at the ESRF - p.194 | 10:45 |
| 11:20 | Ryuichi Nomura<br><br>[O119]- Development of rotational diamond anvil cell for ultra-high pressure deformation experiments - p.377 | | Huaming Hou<br><br>[O121]- Ultrafast multi-frame X-ray imaging/diffraction system for shock loading - p.379 | 11:10 |
| 11:35 | Miao Zhang<br><br>[O120]- Oxidation states of Fe containing minerals - p.378 | | Junyu Huang<br><br>[O122]- Dynamic deformation and fracture of single crystal silicon: a synchrotron-based study - p.380 | 11:35 |
| 11:50 | Lunch Break | | | 11:50 |

| | August 21st 2017 (Mon) |
|---|---|
| Room | 202A+B |
| Chair: | Guoyin Shen |
| 13:30 | Ho-Kwang Mao<br><br>[I56]-Precision calibration for multimegabar pressure in Diamond-Anvil Cells - p.195 |
| 13:55 | Frederic Datchi<br><br>[I58]- Melting and fluid structure of low-Z compounds under extreme conditions - p.197 |
| 14:20 | Yu Ye<br><br>[I59]-Inter-comparison of the Au, Pt and MgO Pressure Scales up to 140 GPa and 2500 K - p.198 |
| 14:45 | Tsutomu Mashimo<br><br>[I70]-Measurement of precise Hugoniot data and Grüneisen parameters of pressure-scale materials - p.209 |
| 15:10 | Coffee Break |

| August 21st 2017 (Mon) | |
|---|---|
| 203A | Room |
| Ross Howie | Chair |
| Xiaodi Liu<br><br>[I60]-Raman studies of hydrogen deuterium and hydrogen-deuterium mixtures at high pressures and low temperatures - p.199 | 13:30 |
| Veronika Afonina<br>[O123]-Raman spectroscopy of Hydrogen and Deuterium at 10-300K - p.381 | 14:00 |
| Graeme Ackland<br><br>[O124]-Phonon localisation and the pitfalls of spectroscopic crystallography - p.382 | 14:15 |
| Brad Steele<br><br>[O125]-Hydrogen intercalation into graphite and novel hydrocarbon extended solids at high pressures - p.383 | 14:30 |
| | 14:45 |
| Coffee Break | 15:15 |

| | August 21st 2017 (Mon) | |
|---|---|---|
| Room | 203B | 205A |
| Chair | Michael Hanfland | Huiqiu Yuan<br>Vasily Potapkin |
| 13:30 | Daniel Haskel<br><br>[K15]- Probing magnetism at high pressure with polarized x-ray resonant absorption and scattering techniques: Novel quantum magnetism in 5d oxides driven by strong spin-orbit interactions - p.131 | Michael Nicklas<br><br>[I62]- Pressure tuning of ferromagnetism in UBeGe - p.201 |
| 14:00 | Marek Tkacz<br><br>[I61]- High pressure, transition metal hydride, Tantalum - p.200 | Xin Lu<br><br>[I63]- Pressure study on Cd-doped 115 heavy fermion superconductor - p.202 |
| 14:30 | Robin Turnbull<br><br>[O126]- High-pressure synthesis and characterization of the ι-phase of nitrogen - p.384 | Kwang-Hua Chu<br><br>[O129]- Pressure-induced transitional electronic transport in $EuFe_2As_2$ - p.387 |
| 14:45 | Jianping Sun<br><br>[O127]- High-Tc Superconductivity in FeSe at High Pressure: Dominant Hole Carriers and Enhanced Spin Fluctuations - p.385 | Jing Song<br><br>[O130]- Magnetic ordering at anomalously high temperatures in Nd and Dy, record superconducting pair breaking in Y(Nd), and search for magnetism in pr and yb under extreme pressures - p.388 |
| 15:00 | Lei Su<br><br>[O128]- Structure and properties of organic molecular 4CN-2An under dynamic compression - p.386 | Bin Shen<br><br>[O131]-Properties of single crystals of the ferromagnet $CeRh_6Ge_4$ under pressure - p.389 |
| 15:15 | Coffee Break | |

| | August 21st 2017 (Mon) | | | |
|---|---|---|---|---|
| Room | 205B | | 206A+B | Room |
| Chair | Victor Naden Robinson<br>Mingguang Yao | | Zizheng Gong | Chair |
| 13:30 | Dominik Kraus<br><br>[O132]- Experimental investigation of diamond precipitation inside giant planets - p.390 | | Paul Hazell<br><br>[I65]-The dynamic behavior and damage characteristics of hexagonal close-packed metals - p. 204 | 13:30 |
| 13:45 | Lin Li<br><br>[O133]- Perovskite phase relations in the system of $MgSiO_3$-$MnSiO_3$-$CaSiO_3$ - p. 391 | | Jianbo Hu<br><br>[I66]-Shock-induced phase transitions of polycrystals observed via single-shot nanosecond time-resolved X-ray diffraction- p.205 | 13:45 |
| 14:00 | Hongsheng Yuan<br><br>[O134]-The combined iron, aluminum and water effects on the bridgmanite to post-perovskite transition in the deep lower mantle - p.392 | | | |
| 14:15 | Meiling Jin<br><br>[O135]-Superconductivity bordering rashba type topological transition - p.393 | | Bixiong Bie<br><br>[O137]- Characterization of dynamic tensile deformation and damage of $B_4C$-reinforced Al composites with synchrotron-based time-resolved x-ray imaging - p.395 | 14:00 |
| 14:30 | Yating Jia<br><br>[O136]-Pressure-induced superconductivity in three-dimensional topological dirac semimetal $Cd_3As_2$ - p.394 | | Lin Wang<br><br>[O138]- Shock-induced Martensite phase transformation and its effect on properties of β type titanium alloy - p.396 | 14:15 |
| 14:45 | Razvan Caracas<br><br>[I64]-Supercritical silicate melts from the Giant Impact to the Magma Ocean - p.203 | | Zhengye Zhong<br><br>[O139]- Texture induced anisotropic phase transformation in a NiTi shape memory alloy - p.397 | 14:30 |
| 15:15 | Coffee Break | | | 15:15 |

| | August 21st 2017 (Mon) |
|---|---|
| Room | 202A+B |
| Chair | Taku Tsuchiya |
| 15:45 | Isaac Silvera<br><br>[I67]- Pressure determination for ultra-High pressures in DACs- p. 206 |
| 16:10 | Eugene Gregoryanz<br><br>[I68]- Hydrogen and diamond Raman frequencies as a pressure comparison gauge - p.207 |
| 16:35 | Alexander Goncharov<br><br>[I69]-High-pressure calibration at high temperatures: prospects the for primary scale beyond 100 GPa - p.208 |
| 17:00 | Karl Syassen<br><br>[I57]- Thoughts on pressure and its calibration - p.196 |
| 17:25 | Discussion |

| August 21st 2017 (Mon) | |
|---|---|
| 203A | Room |
| Veronika Afonina<br>Liping Wang | Chair |
| James Hamlin<br><br>[I71]- Can high-pressure transport measurements be performed in a high-throughput fashion in order to discover new superconductors - p.210 | 15:45 |
| Zhenxian Liu<br><br>[I72]- Synchrotron infrared spectroscopy under extreme conditions: from NSLS-U2A to FIS at NSLS-II - p.211 | 16:15 |
| Yanwei Huang<br><br>[O140]-Pressure-induced amorphization and enhancement of electric con-ductivity for spinel $Li_4Ti_5O_{12}$ anode –p.398 | 16:45 |
| Junliang Zhang<br><br>[O8]-Structures and superconductivities of topological insulators under high pressure - p.266 | 17:00 |
| Haoxiang Jin<br><br>[O142]- A novel diamond anvil cell for x-ray diffraction at cryogenic temperatures manufactured by 3D printing - p. 400 | 17:15 |

| | August 21st 2017 (Mon) | |
|---|---|---|
| Room | 203B | 205A |
| Chair | Graeme Ackland<br>Bingbing Liu | Karl Syassen<br>Fusheng Liu |
| 15:45 | Ove Andersson<br><br>[I73]-Pressure collapsed clathrate hydrates and their properties – p. 212 | Yury Fomin<br><br>[I76] -Collective excitations in liquids at supercritical pressures: phonon theory of a fluid state - p.215 |
| 16:15 | Bin Chen<br><br>[I74]- Plastic Deformation at the nanoscale and superconductivity enhancement in decompression - p.213 | Rostislav Hrubiak<br><br>[O144] -Microstructure revealing molten history - p.402 |
| 16:30 | | Lei Liu<br><br>[O145] -Lattice Distortion-Induced Sluggish Phase Transition in $CoCrFeNi_xAl_{1-x}$ (x=0.5, 0.75) High-Entropy Alloys at High Pressures - p.403 |
| 16:45 | Huiyang Gou<br><br>[I75] -High pressure synthesis of novel functional materials- p.214 | Shi-Kai Xiang<br><br>[O146] -The phase transition of Bi melts under high pressure - p.404 |
| 17:00 | | Chan Gao<br><br>[O147] -Phase transition of RDX under high pressure - p.405 |
| 17:15 | Cancan Shao<br><br>[O143]- Phase transition of alkaline earth metal sulphide under high pressure - p.401 | Binqiang Luo<br><br>[O148] -Dynamic behaviors of $MB_2$ magnesium alloy under ramp wave and shock wave compression - p.406 |

| | August 21st 2017 (Mon) | | | |
|---|---|---|---|---|
| Room | 205B | | 206A+B | Room |
| Chair | Kurt Leinenweber<br>Li Zhang | | Sen Chen | Chair |
| 15:45 | Tomoo Katsura<br><br>[K16]-Generation of ultrahigh pressures by Kawai-type multi-anvil presses with carbide anvils and its application to geosciences - p.132 | | Guiji Wang<br><br>[I77]-Recent advances in quasi-isentropic compression experiments at institute of fluid physics of CAEP - p.216 | 15:45 |
| 16:15 | Nan Zhang<br><br>[O149]-Research on the Complex Arc Characteristic of Current-limiting Fuses - p.407 | | Xiaoxi Duan<br><br>[O154]- A method for impedance-match experiments with unsteady shock loading - p.412 | 16:10 |
| 16:30 | Arumugam Sonachalam<br><br>[O150]-Pressure effect on martensitic transition and piezoresistivity in $Ni_{2.2}Mn_{0.6}V_{0.12}Ga_{1.08}$ Heusler alloy under cubic anvil press upto 8 GPa - p.408 | | Chengjun Li<br>[O155]-A simple and accurate method for shock wave velocity determination and its potential application in reflectivity measurement - p.413 | 16:25 |
| 16:45 | Eiichi Takahashi<br><br>[O151]- Melting process in Hawaii plume: experiments by a large volume Kawai-type multi-anvil apparatus in Guangzhou - p.409 | | Xiaojuan Ma<br><br>[O156]- Flyer-impact perturbation method for material strength measurement - p.414 | 16:40 |
| 17:00 | Ming Zhang<br><br>[O152]- High pressure impact on alpha-decay radiation damaged materials - p.410 | | Haiwei Chai<br><br>[O157]- Sound velocity, equation of state, temperature and melting of LiF single crystals under shock compression - p.415 | 16:55 |
| 17:15 | Yuanyuan Jiao<br><br>[O153]-High pressure synthesis and physical properties of $Cr_2ReO_6$ and $CrReO_4$ - p.411 | | | |

| | August 22nd 2017 (Tue) |
|---|---|
| 8:00 | Registration |
| 8:30 | PLENARY TALK - Ballroom A<br>**Tetsuo IRIFUNE**<br><br>**Synthesis of novel nano-ceramics using large-volume multi-anvil press** - p.108<br>Chair: Jiuhua Chen |
| 9:10 | PLENARY TALK - Ballroom A<br>**Yongjun TIAN**<br><br>**Nanotwinned diamond and its hardness limit** - p.109<br>Chair: Jiuhua Chen |
| 9:50 | Coffee break |
| Room | Ballroom A |
| Chair | Yue Meng<br>Hanns-Pieter Liermann |
| 10:20 | Guoyin Shen<br><br>[K17]-High pressure studies using synchrotron radiation at the advanced photon source - p.133 |
| 10:50 | Sakura Pascarelli<br><br>[K18]-Frontiers of high pressure researchat the european synchrotron radiation facility - p.134 |
| 11:20 | |
| 11:50 | Lunch Break |

| August 22nd 2017 (Tue) | | |
|---|---|---|
| Registration | | 8:00 |
| PLENARY TALK - Ballroom A<br>**Tetsuo IRIFUNE**<br><br>**Synthesis of novel nano-ceramics using large-volume multi-anvil press** - p.108<br>Chair: Jiuhua Chen | | 8:30 |
| PLENARY TALK - Ballroom A<br>**Yongjun TIAN**<br><br>**Nanotwinned diamond and its hardness limit** - p.109<br>Chair: Jiuhua Chen | | 9:10 |
| Coffee break | | 9:50 |
| 202A+B | 203A | Room |
| Lin Wang | Pavel Levashov | Chair |
| Yining Huang<br><br>[I78]-Probing the behavior of $CO_2$ in MOFs under high external pressures - p.217 | Eiji Ohtani<br><br>[K19]-Physical and chemical properties of iron alloys and composition of the earth's inner core - p.135 | 10:20 |
| Mario Santoro<br><br>[O158]-Sub-nano confined, dense simple molecular systems at high pressures - p.416 | Yingwei Fei<br><br>[K9]-Experimental constraints on the composition of the earth's core- p. 125 | 10:50 |
| Mihye Kong<br><br>[O159]-Compression behaviors of chabazite with $Li^+$, $Na^+$, $Ag^+$, $K^+$, $Rb^+$ and $Cs^+$ as extra-framework cations - p.417 | | 11:05 |
| Jinhyuk Choi<br><br>[O160]-Spatial separation of inserted water during pressure-induced hydration in mesolite - p.418 | Haijun Huang<br><br>[O162]-Silicon distribution in Earth's core constrained from shockwave data on Fe-Si alloy - p.420. | 11:20 |
| Yilong Pan<br><br>[O161]-A nanotwin diamond with anisotropic hardness - p.419 | Zhicheng Jing<br><br>[O163]- In-situ elastic wave velocity measurements of antigorite at high pressure and high temperature conditions - p.421 | 11:35 |
| Lunch Break | | 11:50 |

| | August 22nd 2017 (Tue) | |
|---|---|---|
| 8:00 | Registration | |
| 8:30 | PLENARY TALK - Ballroom A<br>**Tetsuo IRIFUNE**<br><br>**Synthesis of novel nano-ceramics using large-volume multi-anvil press** - p.108<br>Chair: Jiuhua Chen | |
| 9:10 | PLENARY TALK - Ballroom A<br>**Yongjun TIAN**<br><br>**Nanotwinned diamond and its hardness limit** - p.109<br>Chair: Jiuhua Chen | |
| 9:50 | Coffee break | |
| Room | 203B | 205A |
| Chair | Timothy A. Strobel | Jinfu Shu<br>Panpan Kong |
| 10:20 | Maosheng. Miao<br><br>[I80]-Reactivity of noble gases under high pressure - p.219 | Valery Levitas<br><br>[I82]-Coupled phase transformations and plastic flow in traditional and rotational diamond anvils: Four-scale theory and interpretation of experiments - p.221 |
| 10:35 | | |
| 10:50 | Yongjae Lee<br><br>[I81]-High-pressure crystallography of porous and layered materials - p.220 | Yang Zhao<br>[O166]-K-Shell photoabsorption edge for state diagnosis of shock compressed matter - p.424 |
| 11:05 | | Dongxiao Liu<br><br>[O167]-Reflectivity evolution of warm dense gold in metal-nonmetal transition regime - p.425 |
| 11:20 | Bertil Sundqvist<br><br>[O164]-Intermolecular bonding and the pressure-temperature phase diagram of $C_{70}$ - p.422 | Nilesh Salke<br>[O168]-Pressure-induced structural phase transitions in topological superconductor $(Pb_{0.5}Sn_{0.5})_{0.75}In_{0.25}Te$ - p.426 |
| 11:35 | Victor Naden Robinson<br>[O165]-Ionic ammonia-rich hydrates at planetary conditions - p.423 | Liping Wang<br><br>[O169]-Effect of electronic disordering on the thermal equation of state of magnetite - p.427 |
| 11:50 | Lunch Break | |

| | August 22nd 2017 (Tue) | | | |
|---|---|---|---|---|
| 8:00 | Registration | | | 8:00 |
| 8:30 | PLENARY TALK - Ballroom A<br>**Tetsuo IRIFUNE**<br><br>**Synthesis of novel nano-ceramics using large-volume multi-anvil press** - p.108<br>Chair: Jiuhua Chen | | | 8:30 |
| 9:10 | PLENARY TALK - Ballroom A<br>**Yongjun TIAN**<br><br>**Nanotwinned diamond and its hardness limit** - p.109<br>Chair: Jiuhua Chen | | | 9:10 |
| 9:50 | Coffee break | | | 10:15 |
| Room | 205B | | 206A+B | Room |
| Chair | Michael Guerette<br>Xiaohui Yu | | Anmin He | Chair |
| 10:20 | Bjoern Winkler<br><br>[K20]-Synthesis of Hf8O7 - a new binary hafnium oxide, at high pressures and high temperatures - p.136 | | Ivan Oleynik<br><br>[I83]-Phase transitions under dynamic compression - p.222 | 10:20 |
| 10:50 | Takamitsu Yamanaka<br>[O170]- Magnetic and structure transition of $Mn_{1-x}Fe_{2+x}O_4$ by neutron diffraction study under high-pressure and high-temperature - p.428 | | Yang Cai<br><br>[I84]-Homogeneous crystal nucleation in liquid copper under quasi-isentropic compression - p.223 | 10:45 |
| 11:05 | Fuminori Honda<br><br>[O171]-Effect of pressure on the novel electronic state in $EuRh_2Si_2$ and $EuNi_2Ge_2$ - p.429 | | | |
| 11:20 | Silvia Pandolfi<br><br>[O172]-Exploring silicon phase diagram: new hexagonal allotropes - p.430 | | Xiaoyi Liu<br><br>[O174]-Interface strengthening effect in graphene-metal nanolayered composites under dynamic loading - p.432 | 11:10 |
| 11:35 | Yongmoon Lee<br><br>[O173]-Natrolites with different $Fe^{2+}/Fe^{3+}$ cation ratios - p.431 | | Tao Chong<br><br>[O175]-Modeling dynamic phase transition in zirconium with two kinds of multi-phase equation of state - p.433 | 11:25 |
| 11:50 | Lunch Break | | | 11:40 |

| | August 22nd 2017 (Tue) |
|---|---|
| Room | 202A+B |
| Chair | Daniel Haskel<br>Naohisa Hirao |
| 13:30 | Yoshino Takashi<br><br>[I85]-The future perspective of large-volume press beam line at SPring-8 and determination of anelastic properties by in situ strain observation under cyclic loading - p.224 |
| 13:55 | Yijin Liu<br><br>[I86]-Five dimensional (x, y, z, energy, pressure) visualization of a pressure-induced phase transition at nanoscale - p.225 |
| 14:20 | Mohamed Mezouar<br><br>[O176]- Vertical laser heating system at beamline ID27 of the ESRF - p.434 |
| 14:35 | Tony Yu<br><br>[O177]-Large-volume, high-pressure research at the GSECARS beamlines, advanced photon source - p.435 |
| 14:50 | Naoki Ishimatsu<br><br>[O178]- Hydrogenation process of Co metal studied<br>by extended X-ray absorption fine structure (EXAFS) under pressure - p.436 |
| 15:05 | Rostislav Hrubiak<br><br>[O179]-XRD contrast imaging using hardware-based 'fly' scanning and XDI software at HPCAT - p.437 |
| 15:20 | Coffee Break |

| August 22nd 2017 (Tue) | |
|---|---|
| 203A | Room |
| Heping Li | chair |
| Xiang Wu<br><br>[I87]-Elasticity of FeAl-bearing phase D at high pressure and geophysical implications for the upper lower mantle - p.226 | 13:30 |
| Yu Ye<br><br>[P308]Thermal elasticities of humite-group minerals: implication for water in the subduction slab - p. 846 | 13:50 |
| Yonggang Liu<br><br>[O180]-Equation of state of liquid bismuth and its melting curve from ultrasonic velocity measurements under high pressur - p.438 | 14:10 |
| Dawei Fan<br><br>[O181]-Elasticity of single-crystal periclase (MgO) at high pressure and high temperatures - p.439 | 14:25 |
| Jiaji Jin<br><br>[O182]- The effect of trivalent cations on hydrous α-β-γ Mg2SiO4 phase transitions - p.440 | 14:40 |
| Wangsheng Qian<br><br>[O183]-Elasticity of orthoenstatite under high-pressure high-temperature conditions and the possible origin of low $V_P/V_S$ zones in the mantle wedge - p.441 | 14:55 |
| Jikai Zhang<br><br>[O184]-The effect of Fe and Mg substitution on the elastic wave velocities of synthetic orthopyroxene - p.442 | 15:10 |
| **Coffee Break** | 15:15 |

| | August 22nd 2017 (Tue) | |
|---|---|---|
| Room | 203B | 205A |
| Chair | Abhirami Saminathan<br>Mario Santoro | Takahiro Matsuoka<br>Dmitry Minakov |
| 13:30 | Yang Song<br><br>[I88]-Pressure-assisted photon-induced chemical reactions of selected hydrocarbon systems - p.227 | F.Malte Grosche<br><br>[I89]-Correlated states near pressure-induced instabilities –p 228 |
| 14:00 | Kuo Li<br><br>[I89]- Pressure induced polymerization: from molecules to materials - p.228 | Shanti Deemyad<br><br>[I91]-The many faces of the lightest metal "LITHIUM" under Pressure - p.230 |
| 14:30 | Sergey Ovsyannikov<br><br>[O185]- Charge ordering in $Fe_4O_5$ - p.443 | Jie Fu<br><br>[O188]-Equation of state for H2O-CO2 mixture from first principles - p.446 |
| 14:45 | Altair Soria Pereira<br><br>[O186]- Titanium matrix composites produced by high pressure reaction sintering - p.444 | Haiyan Lu<br><br>[O189]-Electronic correlations of element cerium under high pressure - p.447 |
| 15:00 | Simon Redfern<br><br>[O187]-Modifications of ZIFs - role of guest molecules, pressure and temperature - p.445 | Guicun Ma<br><br>[O190]-The high pressure multiphase equation of state of carbon - p.448 |
| 15:15 | Coffee Break | |

| | August 22nd 2017 (Tue) | | |
|---|---|---|---|
| Room | 205B | 206A+B | Room |
| Chair | Takamitsu Yamanaka<br>Haiyan Zheng | Zhengye Zhong | Chair |
| 13:30 | Yanming Ma<br><br>[K21]-Possible high-temperature superconductivity in pressure-stabilized hydrogen clathrate structures in rare earth hydrides - p.137 | Pengwan Chen<br><br>[I93]-Preparation of high-quality graphene sheets induced by shock wave - p.232 | 13:30 |
| 14:00 | Alexey Belik<br><br>[I92]-New perovskites in $R_2O_3$-$Mn_2O_3$ systems (R = rare-earths) - p.231 | Meilan Qi<br><br>[O194]-Dynamic fracture of carbon nanotube/epoxy composites under high strain-rate loading - p.452 | 13:55 |
| | | Qiang Zhou<br><br>[O195]-Fabrication and characterization of shock consolidated W-Al energetic structural material - p.453 | 14:10 |
| 14:30 | Hongbo Wang<br><br>[O191]-Stable solid and aqueous $H_2CO_3$ from $CO_2$ and $H_2O$ at high pressure and high temperature - p.449 | Bo Li<br><br>[O196]-Effects of inclusion on dynamic deformation and fracture of aluminum - p.454 | 14:25 |
| 14:45 | Jack Binns<br><br>[O192]-Reactivity of lithium and the d-block metals under pressure - p.450 | Siyi Wu<br><br>[O197]-Heterogeneous deformation of granular ceramics under dynamic loading - p.455 | 14:40 |
| 15:00 | Bosen Wang<br><br>[O193]-Hydrostatic pressure effect of iron-based superconductor $KFe_2As_2$ and anti-post-perovskite superconductors $V_3$(As, P)N-p.451 | Jun Zhu<br><br>[O198]-Peak stress, strain rate, and pulse duration effects on spall damage of a mild carbon steel - p.456 | 14:55 |
| 15:15 | Coffee Break | | 15:10 |

| | August 22rd 2017 (Tue) |
|---|---|
| Room | 202A+B |
| Chair | Sakura Pascarelli<br>Yongjae Lee |
| 15:45 | Wenge Yang<br><br>[I94]-Exploring slow dynamic properties of materials under high pressure with high brilliant synchrotron sources - p.233 |
| 16:10 | Hanns-Peter Liermann<br><br>[I95]-Cutting edge research at high-pressure and high/low-temperature in the DAC at the ECB, PETRA III, DESY - p.234 |
| 16:35 | Dean Smith<br><br>[O199]- *In situ* CO2 laser heating at the HPCAT diffraction beamline - p.457 |
| 16:50 | Michael Hanfland<br><br>[O200]-The high pressure crystallography beamline ID15B of the ESRF - p.458 |
| 17:05 | Naohisa Hirao<br><br>[O201]-High pressure and low temperature micro-beam X-ray diffraction system in beamline BL10XU at SPring-8 - p.459 |
| 17:20 | |
| 17:35 | |

| August 22rd 2017 (Tue) | |
|---|---|
| 203A | Room |
| Shenghua Mei | Chair |
| Xi Liu<br><br>[I96]-Forsterite and its metastable phases, with implications to the subduction zones - p.235 | 15:45 |
| Xianlong Wang<br><br>[O202]-Postperovskite phase boundary of Fe and Al-bearing MgSiO3 at high-P,T conditions - p.460 | 16:05 |
| Lei Liu<br><br>[O203]-First-principles study of dense hydrous magnesium silicate phase H - p.461 | 16:20 |
| Xingcheng Liu<br><br>[O204]-Role of oceanic crust in deep water cycle - p.462 | 16:35 |
| Lei Wu<br><br>[O205]-Pressure-induced property improvements in yttrium-doped BaZrO3 and bismuth-doped Zn2GeO4 - p.463 | 16:50 |
| Jingui Xu<br><br>[O206]-Phase transformations of enstatite at high pressures and temperatures - p.464 | 17:05 |
| Yukai Zhuang<br><br>[O207]-Pressure-induced permanent metallization with reversible structural transition in molybdenum disulfide - p.465 | 17:20 |
| Jinfu Shu<br><br>[O208]-Discover naturally new minerals and experimentally study extreme conditions mineralogy - p.466 | 17:35 |

| | August 22rd 2017 (Tue) | |
|---|---|---|
| Room | 203B | 205A |
| Chair | Guangfu Ji<br>Kuo Bao | Yingwei Fei |
| 15:45 | Frédéric Datchi<br><br>[I97]-Melting and fluid structure of low-Z compounds under extreme conditions - p. 236 | Toshiaki Iitaka<br><br>[I99]-Proton tunneling in high pressure Ices - p.238 |
| 16:15 | Yan Bi<br><br>[I98]-Pressure scales and non-hydrostaticity in diamond anvil cells - p.237 | Zhipeng Gao<br><br>[I100]- Giant power output in lead-free ferroelectrics-p.239 |
| 16:30 | Hao Su<br><br>[O209]-Investigation of pyridine and binary mixture (pyredine+water) under high pressure and laser irradiation - p.467 | Xiuru Liu<br><br>[O214]-A study of phase transitions in amorphous sulfur - p.472 |
| 16:45 | Serge Desgreniers<br><br>[O210]-Dense nitrogen-rich compounds from intermixtures - p.468 | Min Wu<br><br>[O215]-Density power law of compressed metallic glasses - p.473 |
| 17:00 | Igor Danilov<br><br>[O211]-Influence of the hydrogen bonds on the elastic properties of molecular glassformers - p.469 | Xiao Tan<br><br>[O216]-Investigation of high-pressure phase transition of P-nitrophenol polymorphism - p.474 |
| 17:15 | Jun Zhang<br><br>[O212]-Synthesis, crystal structures, and electronic properties of one dimensional $Ba_9Sn_3(Te_{1-x}Se_x)_{15}$ (x = 0 - 1) - p.470 | Dmitry Minakov<br><br>[O217]-Melting curves of metals with heated electrons from first-principles calculations - p.475 |
| 17:30 | Guoqiang Zhao<br><br>[O213]- Single Crystal Growth and Spin Polarization Measurements of Diluted Magnetic Semiconductor $(BaK)(ZnMn)_2As_2$-p.471 | Zhenhai Yu<br><br>[O218]-Crystal and electronic structure in $ThCr_2Si_2$-type Eu-based pnictides under high pressure - p.476 |
| 17:45 | | |

| | August 22rd 2017 (Tue) | | | |
|---|---|---|---|---|
| Room | 205B | | 206A+B | Room |
| Chair | Jaeyong Kim | | Wurong Jian | Chair |
| 15:45 | Lars Ehm<br><br>[I101]- Insight into impact mineralogy from time-resolved diffraction experiments during fast compression - p.240 | | Juan Pablo Escobedo-Diaz<br><br>[I103]-Effect of crystallographic structure on dynamic damage - p.242 | 15:45 |
| 16:15 | Runze Yu<br><br>[I102]-Melting of Pb charge glass and simultaneous Pb-Cr charge transfer in PbCrO 3 as the origin of volume collapse - p.241 | | Lei Lu<br><br>[O224]-Multiscale measurements on anisotropic deformation of a magnesium alloy under dynamic compression - p.482 | 16:10 |
| 16:45 | Vladimir Turkevich<br><br>[O219]-HPHT sintering of cubic boron nitride with carbides of transition metals - p.477 | | Duan Fan<br><br>[O225]-Shock-induced mass ejection of tin, aluminum and copper - p.483 | 16:25 |
| 17:00 | Zilong Xu<br><br>[O220]-The investigationof all-inorganic lead-halide perovskite quantum dots photoluminescenceproperties under high pressure - p.478 | | Chao Li<br><br>[O226]-Anisotropic shock response of a duplex stainless steel - p.484 | 16:40 |
| 17:15 | Yunyu Yin<br><br>[O221]-LaMn3Ni2Mn2O12: an A- and B site ordered quadruple perovskite with Asite tuning orthogonal spin ordering- p.479 | | Shijia Ye<br><br>[O227]-Shock-induced phase transition in 2205 duplex stainless steel - p.485 | 16:55 |
| 17:30 | Oleksandr Kurakevych<br><br>[O222]- Silicon-based materials by in situ high pressure synthesis - p.480 | | Xiaochang Tang<br><br>[O228]-Spall damage of a particle-reinforced metallic glass matrix composite under high strain rate loading - p.486 | 17:10 |
| 17:45 | Yinghua Li<br>[O223]-Exploration of the capability of the Asay-Window technique to probe the microspall behavior of shock-melted metal target-p.481 | | | 17:25 |

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| Chair | Yanming Ma |
| 8:30 | Aitor Bergara<br><br>[I104]-Atomic hydrogen and lithium under pressure: anharmonic effects in superconductivity, and optical spectra - p.243 |
| 9:00 | Quan Li<br><br>[O229]-Structural metatransition of energetically tangled crystalline phases - p.487 |
| 9:15 | Feng Peng<br><br>[O230]-Unexpected trend in stability of Xe−F compounds under pressure driven by Xe−Xe covalent bonds - p.488 |
| 9:30 | Koichiro Umemoto<br><br>[O231]-Fate of $MgSiO_3$ post-perovskite in super-Earths - p.489 |
| 9:45 | Yunwei Zhang<br><br>[O232]-Pressure-stabilized insulating electrides in alkaline-earth metal nitrides - p.490 |
| 10:00 | Coffee Break |

| August 23rd 2017 (Wed) | |
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| 203A | Room |
| Xi Liu | Chair |
| Baohua Zhang<br><br>[I105]-Effect of water on Fe-Mg interdiffusion in garnet - p.244 | 8:30 |
| Feiwu Zhang<br><br>[I106]-Lithium defects and diffusivity in forsterite and its high pressure phases - wadsleyite and ringwoodite - p.245 | 8:50 |
| Shuangmeng Zhai<br><br>[O233]-In-situ X-ray diffraction and Raman spectroscopic studies on $CaFe_2O_4$-type β-$CaCr_2O_4$ under high pressures - p.491 | 9:10 |
| Wen Liang<br><br>[O234]-Single crystal growth and characterization of impurity-free magnesite - p.492 | 9:25 |
| Yichuan Wang<br><br>[O235]-Crystal structure of grossular-andradite garnet solid solutions - p.493 | 9:40 |
| Kaixiang Liu<br><br>[O236]-Migration of impurity level reflected in the electrical conductivity variation for natural pyrite at high temperature and high pressure - p.494 | 9:55 |
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| | August 23rd 2017 (Wed) | |
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| Chair | Joseph Nelson | Konstantin Khishchenko<br>Yongtao Zou |
| 8:30 | Bingbing Liu<br><br>[I107]-Novel superhard $sp^3$ Carbon allotrope from cold-compressed $C_{70}$ Peapods - p. 246 | Zhaohui Zhang<br><br>[I108]-Strength of metal materials under ramp wave compression to 70 GPa on PTS - p.247 |
| 9:00 | Alvaro Lobato<br><br>[O237]-Revealing the pressure of chemical entities - p.495 | Shengyi Xie<br><br>[O241]-Phase sequence of metal dioxides under high-pressure - p.499 |
| 9:15 | Deok-Soo Kim<br><br>[O238]-Molecular geometry operating system :<br>a novel tool for modeling high-pressure materials - p.496 | Pavel Levashov<br><br>[O242]-Simulation of high-pressure melting using direct entropy calculation - p.500 |
| 9:30 | Roman Martonak<br><br>[O239]-High-pressure phase diagram, structural transitions, and persistent non-metallicity of $BaBiO_3$: theory and experiment - p.497 | Jinyuan Yan<br><br>[O244]- A tungsten heater up to 1700K for BX90 Diamond Anvil cells - p.502 |
| 9:45 | Yuanchao Gan<br><br>[O240]-Numerical simulation of plane strain deformation behavior and texture evolution for pure magnesium crystal plasticity - p.498 | Qiyue Hou<br><br>[O243]- The fractal microstructure of Ce during γ-α transition from high pressure X-ray nano-tomography - p.501 |
| 10:00 | Coffee Break | |

| | August 23rd 2017 (Wed) | | | |
|---|---|---|---|---|
| 8:00 | Registration | | | 8:00 |
| Room | 205B | | 206A+B | Room |
| Chair | Oleksandr Kurakevych<br>Vladimir Turkevich | | Jianbo Hu | Chair |
| 8:30 | Takashi Taniguchi<br><br>[I109]-High pressure synthesis of polymorphic phase of Boron Nitride; Impurity control and new functionalization - p.248 | | Qi An<br><br>[I111]-Atomistic mechanisms underlying amorphous band formation in boron carbide under shock compression - p.250. | 8:30 |
| 9:00 | Chris Thomas<br><br>[I110]-Interplay between physical and chemical pressure on structure. - p.249 | | Xianming Zhou<br><br>[O247]-Optical characterizations of a $Gd_3Ga_5O_{12}$ single crystal during the elastic-plastic and phase transitions under shock compression - p.505 | 8:55 |
| 9:30 | Shu Muraoka<br><br>[O245]-New compound synthesized by laser heating of NaCl and $H_2$ mixture under high pressures - p.503 | | Fusheng Liu<br><br>[O248]-Raman spectra of nitromethane singly shocked to 13 GPa and implications to shock-induced initiation reaction - p.506 | 9:10 |
| 9:45 | Jianhong Dai<br><br>[O246]-Competing crystal field and spin-orbital coupling in an iridium(V) pyrochlore $Cd_2Ir_2O_7$ - p.504 | | Tang Cheng<br><br>[O249]-Coherent optical phonon generated by shock wave in crystal - p.507 | 9:25 |
| | | | Qiancheng Liu<br><br>[O250]-Optical absorbances of $Gd_3Ga_5O_{12}$ single crystals under shock compression to 211GPa - p.508 | 9:40 |
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| | August 23rd 2017 ( Wed ) |
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| 11:00 | Joseph Nelson<br><br>[O251]-High-pressure phases of group-II difluorides: polymorphism and superionicity - p.509 |
| 11:15 | Xiaowei Liang<br><br>[O253]-B-Si system at 1atm and under pressure - p.511 |
| 11:30 | Ying Sun<br><br>[O254]-High-temperature superconductivity in compressed lithium-introduced magnesium hydrides - p.512 |
| 11:45 | Zhi Li<br><br>[O252]-Topological phases in rare earth monopnictides- p.510 |
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| Wenqing Sun<br><br>[O259]-Effect of dehydration on the electrical conductivity of metapelite at high temperatures and pressures - p 517 | 11:50 |
| Sibo Chen<br><br>[O260]-Dehydration of phengite inferred by electrical conductivity measurements: implication for the high conductivity anomalies relevant to the subduction zones - p.518 | 12:05 |
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| | AUGUST 23rd 2017(Wed) |
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| 14:10 | ACHPR Poster awards |
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| 14:50 | ACHPR 9 Promotion<br>CHPC 20 Promotion |
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| 17:30 | Closing Remark: Haozhe Liu |

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