

## Conference Program, March 1, 2022

### Opening Ceremony 15:00

Introduction by V. G. Sultanov, I. V. Lomonosov, K. V. Khishchenko

Chairman

*Prof. A. V. Eremin*

- 15:45 Equation of state of matter at extreme conditions (plenary)  
*Lomonosov Igor Vladimirovich (IPCP RAS, Chernogolovka, Russia)*
- 16:15 Ionization potentials of multicharged ions of medium elements  
*Shpatakovskaya Galina Vasilievna (KIAM RAS, Moscow, Russia)*
- 16:30 [zoom] Anomalous thermodynamics and entropic phase transition problem in hot dense hydrogen (deuterium)  
*Iosilevskiy Igor L'vovich (JIHT RAS, Moscow, Russia), Gryaznov V. K.*

16:45  **CONFERENCE PHOTO (OUTSIDE)**

17:00  **[ZOOM] CONFERENCE PHOTO**

 **COFFEE-BREAK**

Chairman

*Prof. I. V. Lomonosov*

- 17:15 [zoom] New type of phase transitions in non-ideal plasma of hydrogen (deuterium) with chemical reactions of ionization and dissociation  
*Khomkin A. L., Shumikhin Aleksey Sergeevich (JIHT RAS, Moscow, Russia)*
- 17:30 Thermodynamics of uniform electron gas at finite temperature by path integral Monte Carlo simulations with improved sign problem treatment  
*Levashov Pavel Remirovich (JIHT RAS, Moscow, Russia), Filinov V. S., Larkin A. S.*
- 17:45 Verification of thermodynamic mixing rules for electrons in a mixture of Thomas–Fermi atoms  
*Krasnova Polina Andreevna (JIHT RAS, Moscow, Russia), Levashov P. R.*
- 18:00 On the interrelation between the metal–non-metal and liquid–gas transition in metallic fluids  
*Rakhel Anatolii Dmitrievich (JIHT RAS, Moscow, Russia)*
- 18:15 The sound velocity in expanded liquid lead  
*Kondratyev Arseniy Mikhailovich (JIHT RAS, Moscow, Russia), Rakhel A. D.*
- 18:30 [zoom] On the parameters of state of iron in the Earth and other planets interior  
*Anisichkin Vladimir Fedorovich (LIH SB RAS, Novosibirsk, Russia), Prueel E. R.*
- 18:45 [zoom] Investigation of thermophysical properties of metals near the liquid–gas coexistence curve: Ab initio calculations and experiment  
*Minakov Dmitriy Vyacheslavovich (JIHT RAS, Moscow, Russia), Paramonov M. A., Fokin V. B., Levashov P. R., Dorovatovskiy A. V., Sheindlin M. A.*

19:00  **SUPPER**

Chairman

Dr. P. R. Levashov

- 20:00 [zoom] Investigation of thermophysical properties of liquid iron by an ab initio molecular dynamics  
*Paramonov Mikhail Anatol'evich (JIHT RAS, Moscow, Russia), Minakov D. V., Levashov P. R.*
- 20:15 [zoom] Mechanical and structural features of catalytically polymerized three-dimensional C<sub>60</sub>  
*Khorobrykh Fedor Sergeevich (TISNUM, Troitsk, Russia), Churkin V. D., Popov M. Yu.*
- 20:30 High-pressure phases in aluminum-based alloys  
*Menshikova Svetlana Gennadievna (UdmFIC UB RAS, Izhevsk, Russia), Brazhkin V. V.*
- 20:45 [zoom] Temperature deformation relations in reversibility of shape memory alloys  
*Adiguzel Osman (Firat University, Elazig, Turkey)*
- 21:00 The molecular dynamics study of argon solid–liquid transition inside graphene nanobubble  
*Korneva Mariia Andreevna (Skoltech, Moscow, Russia), Akhatov I. S., Zhilyaev P. A.*
- 21:15 [zoom] Shock compression of MgO to 1 TPa: Compressibility and temperature measurements  
*Nikolaev Dmitry Nikolaevich (IPCP RAS, Chernogolovka, Russia), Ostriak A. V.*
- 21:30 Elastic properties of Yukawa crystals  
*Kozhberov Andrey Andreyevich (Ioffe Institute, Saint-Petersburg, Russia)*
- 21:45– [zoom] Quantum chemical study of the interatomic interaction of ArN<sup>+</sup>
- 22:00 *Maltsev Maxim Alexandrovich (JIHT RAS, Moscow, Russia), Minenkov Y. V., Morozov I. V.*



## Conference Program, March 2, 2022

### Oral Session 15:00

Chairman

Dr. M. A. Kadatskiy

- 15:00 Investigation of the compressibility of beryllium oxide in shock waves  
*Khishchenko Konstantin Vladimirovich (JIHT RAS, Moscow, Russia), Krupnikov K. K., Zhugin Yu. N., Nikolaev A. Yu., Smirnov E. B., Petrov D. V.*
- 15:15 Project of the station “Fast Processes” at the source of synchrotron radiation SKIF  
*Ten Konstantin Alekseyevich (LIH SB RAS, Novosibirsk, Russia), Prueel E. R., Rubtsov I. A., Kashkarov A. O., Arakcheev A. S., Bukhtiyarov A. V., Zolotarev K. V., Zubavichus Ya. V., Konovalova A. Yu., Kuper K. E., Studennikov A. A., Kazantsev S. R., Shekhtman L. I., Tolochko B. P., Garmashev A. Yu., Petrov D. V., Smirnov E. B., Mikhailov A. L., Spirin I. A., Titova V. B., Kurepin A. E.*
- 15:30 Time resolved small angle x-ray scattering experiments using synchrotron radiation beam  
*Rubtsov Ivan Andreevich (BIC SB RAS, SRF SKIF, Kol'tsovo, Russia), Zubavichus Ya. V., Ten K. A., Prueel E. R., Kashkarov A. O., Shekhtman L. I., Bukhtiyarov A. V., Kuper K. E., Studennikov A. A.*
- 15:45 The application of synchrotron radiation to study excitation of explosion detonation and the process of shock-induced emission of particles from a free metal surface  
*Spirin Ivan Alexeevich (FSUE RFNC-VNIIEF, Sarov, Russia), Antipov M. V., Georgievskaya A. B., Ten K. A., Prueel E. R., Kashkarov A. O., Rubtsov I. A.*
- 16:00 Gapped momentum states in shocked condensed matter  
*Naimark Oleg Borisovich (ICMM UB RAS, Perm, Russia)*
- 16:15 Fracture of solid and liquid lead by the action of a shock wave with a falling profile  
*Malyshev Andrey Nikolaevich (FSUE RFNC-VNIIEF, Sarov, Russia), Ignatova O. N., Raevskiy V. A., Skokov V. I., Katykov A. N., Kryuchkov D. V., Zamotaev D. N., Shiberin I. V., Georgievskaya A. B.*
- 16:30 [zoom] Mineral zircon as a marker for high shock pressures and temperatures in geological materials  
*Kovaleva Elizaveta Ilyinichna (IGG UB RAS, Ekaterinburg, Russia), Zamyatin D. A., Wirth R.*
- 16:45 [zoom] D'yakov-Kontorovich instability in expanding reactive shocks  
*Calvo-Rivera A. (UC3M, Leganés, Spain), Velikovich A. L., Huete C.*

17:00



**COFFEE-BREAK**

Chairman

Dr. K. V. Khishchenko

- 17:15 Refractive index function of soot formed under different conditions: Application to climate change  
*Drakon A. V., Eremin A. V., Gurentsov E. V., Khodyko E. S., Kolotushkin Roman Nikolaevich (JIHT RAS, Moscow, Russia)*

17:30 **[ZOOM] POSTER SESSION**

17:30 [zoom] Exciton mechanism explains experimental discrepancies of warm dense hydrogen metallization measurements

*Fedorov Ilya Dmitrievich (JIHT RAS, Moscow, Russia), Stegailov V. V.*

17:35 [zoom] A wide-range model of metal plasmas based on semiclassical average atom model with self-consistent field

*Polyukhin Alexander Sergeevich (JIHT RAS, Moscow, Russia), Dyachkov S. A., Levashov P. R.*

17:40 [zoom] Influence of taking spin polarization into account on ab initio calculations of thermodynamic properties of solid and liquid iron

*Galtsov Ilya Sergeevich (JIHT RAS, Moscow, Russia), Minakov D. V.*

17:45 [zoom] Influence of the exchange-correlation functional on the compressibility of solid mercury

*Malyugin Alexander Alekseevich (JIHT RAS, Moscow, Russia), Levashov P. R., Minakov D. V.*

17:50 [zoom] Elastic properties of propylene glycol oligomers in the glassy state and glass-liquid transition

*Danilov Igor Vladimirovich (HPPI RAS, Troitsk, Russia), Gromnitskaya E. L., Brazhkin V. V.*

17:55 [zoom] Fragmentation behavior of brittle material under high velocity impact in constrained and non-constrained conditions

*Ignatova Anna Mikhailovna (ICMM UB RAS, Perm, Russia), Yudin M. V., Voronov V. L., Naymark O. B.*

18:00 [zoom] Structural aspect of high intensity dynamic loading of metal targets

*Balakhnin Aleksandr Nikolaevich (ICMM UB RAS, Perm, Russia), Bannikova I. V., Vshivkov A. N., Prokhorov A. E., Uvarov S. V., Naimark O. B.*

18:05 [zoom] Soot nanoparticles decomposition: Molecular dynamics and Monte-Carlo modeling

*Potapov Denis Olegovich (MIPT, Dolgoprudny, Russia), Orekhov N. D.*

18:10 [zoom] Morphology of carbon nanoparticles of detonation synthesis

*Anisichkin Vladimir Fedorovich (LIH SB RAS, Novosibirsk, Russia), Kashkarov A. O., Obraztsov G. K.*

18:15 [zoom] Experimental study of a shock wave movement in a pulse gas discharge plasma

*Militsina Anna Aleksandrovna (MSU, Moscow, Russia), Mursenkova I. V.*

18:20 [zoom] Evaporation and analysis of cryogenics vapors and droplets at emissions of liquefied natural gas

*Zagnit'ko Alexander Vasilievich (NRC KI, Moscow, Russia), Zaretskiy N. P., Alekseev V. I., Matuskov I. D., Pimenov V. V., Sal'nikov S. E., Fedin D. Yu.*

18:25



**SUPPER**

20:00–

**POSTER SESSION**

23:00



## Conference Program, March 3, 2022

### Oral Session 14:30


Chairman

*Dr. K. V. Khishchenko*

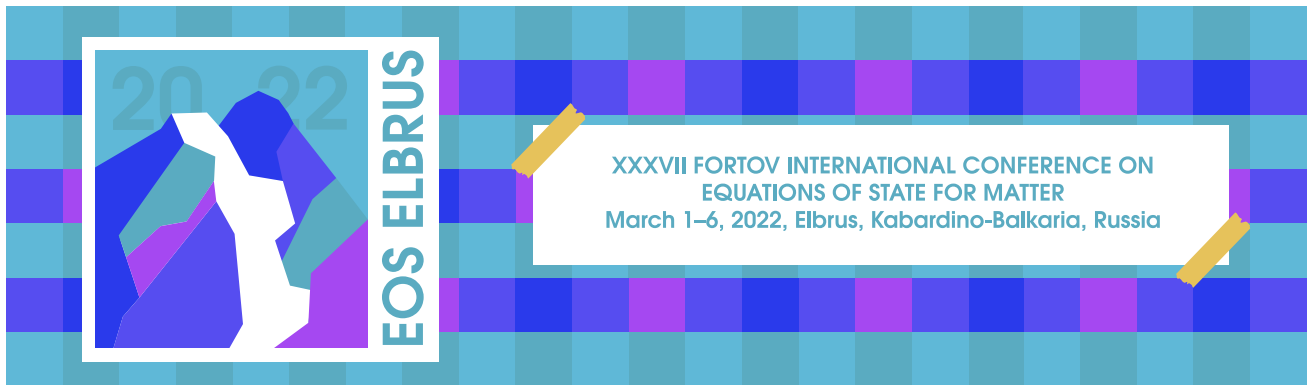
- 14:30 Kinetic model of the explosive transformation of a composition based on octogen during shock-wave initiation  
*Knyazev Vadim Nikolaevich (FSUE RFNC-VNIIEF, Sarov, Russia), Bogdanov E. N., Voronkov R. A., Spirin I. A., Barabin V. V., Kryuchkov D. V.*
- 14:45 [zoom] Regimes of near-stoichiometric hydrogen–air combustion under reciprocating engine conditions  
*Smygalina Anna Evgenievna (JIHT RAS, Moscow, Russia), Kiverin A. D.*
- 15:00 Review of the kinetic mechanisms for modeling the combustion and detonation of acetylene-based mixtures  
*Yarkov Andrey Vladimirovich (JIHT RAS, Moscow, Russia), Kiverin A. D., Yakovenko I. S., Turnin A. V.*
- 15:15 Numerical investigation of gas-dynamic processes in wave conductor when pressure pulsations in flow with periodic detonation waves measuring  
*Sidorov Rodion Sergeevich (CIAM, Moscow, Russia)*
- 15:30 [zoom] Calculation of the heat-loaded vacuum window at the “Fast Processes” beamline at the SRF SKIF synchrotron  
*Studennikov Alexey Aleksandrovich (BIC SB RAS, SRF SKIF, Kol'tsovo, Russia), Rubtsov I. A., Pruel E. R., Ten K. A., Kuper K. E., Zubavichus Ya. V., Bukhtiyarov A. V., Gorbachev M. V., Naumkin V. S.*
- 15:45 Photochemical initiation of energetic materials on the surface of metal oxides  
*Zverev Anton Sergeevich (FRC CCC SB RAS, Kemerovo, Russia), Mitrofanov A. Yu., Ilyakova N. N., Nurmukhametov D. R.*
- 16:00 [zoom] Galactic comets as unique tool for studying spiral construction of the Galaxy  
*Barenbaum Azariy Aleksandrovich (OGRI RAS, Moscow, Russia)*
- 16:30 On numerical instability of Godunov-type schemes for hypersonic shock waves in media with high heat capacity  
*Konyukhov Andrey Viktorovich (JIHT RAS, Moscow, Russia), Levashov P. R., Likhachev A. P.*
- 16:45  **COFFEE-BREAK**

## 17:00 [ZOOM] POSTER SESSION

- 17:00 [zoom] Ab initio calculation of equation of state of crystalline molecular hydrogen with nuclear quantum effects at high pressures  
*Bystryi R. G., Saitov Ilnur Minnigazyevich (HSE, Moscow, Russia)*
- 17:05 [zoom] Crystal structure of a system with three-body interactions in strong confinement  
*Fomin Yury Dmitrievich (HPPI RAS, Troitsk, Russia), Shchukin I. A.*
- 17:10 [zoom] Modeling of elastoplastic flows in homogeneous and porous materials during dynamic pressing in a conical matrix  
*Klinacheva Nataliia Leonidovna (SUSU, Chelyabinsk, Russia), Kuznetsov P. A., Shestakovskaya E. S., Yalovets A. P.*
- 17:15 [zoom] Investigation of nitrogen-containing heterocycles by ion mobility spectrometry  
*Aleksandrova Darya Alekseevna (MUCTR, Moscow, Russia), Melamed T. B., Baberkina E. P., Osinova E. S., Kovalenko A. E., Yakushin R. V., Shaltaeva J. R., Belyakov V. V.*
- 17:20 [zoom] The model of photoacoustic effect in liquid metal colloids  
*Zvekov Alexander Andreevich (KemSU, Kemerovo, Russia), Zverev A. S., Kalenskii A. V.*
- 17:25 [zoom] Hydrogen production by fast methane pyrolysis in a ceramic tube  
*Grigorenko Anatolii Vladimirovich (JIHT RAS, Moscow, Russia), Vlaskin M. S., Dudoladov A. O.*
- 17:30 [zoom] Tailoring the low-dimensional carbon allotropes vibrational signature and functionality at the ion-assisted pulse-plasma growing  
*Lukin Aleksandr Nikolayevich (WCRC, Tuapse, Russia), Gulseren O.*
- 17:35 [zoom] Point defects and electronic structure of  $\text{Fe}_3\text{O}_4$   
*Shutikova Maria Igorevna (JIHT RAS, Moscow, Russia), Stegailov V. V.*
- 17:40 [zoom] Calculation of the chemical potentials of a two-component system on the example of FeO  
*Fominykh Nikita Alekseevich (JIHT RAS, Moscow, Russia), Stegailov V. V.*
- 17:45 [zoom] Kinetics of xenon bubbles formation in  $\gamma$ -uranium  
*Lobashev Egor Andreevich (JIHT RAS, Moscow, Russia), Antropov A. S., Stegailov V. V.*
- 17:50 [zoom] Molecular dynamics simulation of lead melt with iron and oxygen admixtures  
*Khankoian Georgii Vrezhovich (MIPT, Dolgoprudny, Russia), Nikolaev V. S., Stegailov V. V.*
- 17:55 [zoom] The boundary impact on oxygen diffusion in zirconia  
*Savilov Timofey Mikhailovich (JIHT RAS, Moscow, Russia)*
- 18:00 [zoom] Structure of aqueous 1,4-dioxane solution via molecular dynamics  
*Bakulin Ivan Konstantinovich (JIHT RAS, Moscow, Russia), Kondratyuk N. D.*
- 18:05 [zoom] Prediction of transport properties of aqueous sugar solutions using the molecular dynamics method  
*Deshchenia Vladimir Igorevich (JIHT RAS, Moscow, Russia), Kondratyuk N. D., Lankin A. V., Norman G. E.*
- 18:10 [zoom] Comparison of aerolysin modifications via molecular dynamics  
*Polyachenko Yury Anatolievich (MIPT, Dolgoprudny, Russia), Cao C., Dal-Peraro M., Aksimentiev A.*
- 18:15 [zoom] Two types of atoms collective motions in crystals  
*Negodin Vladislav Dmitrievich (JIHT RAS, Moscow, Russia), Fleita D. Iu., Norman G. E.*
- 18:20 [zoom] Simulation of multi-material flows with the coupled smoothed particle and finite volume methods  
*Muratov Rodion Vladimirovich (VNIIA(S), Moscow, Russia), Dyachkov S. A.*
- 18:25 [zoom] Adaptive moving window technique for simulation of stationary shock waves  
*Murzov Semeon Alexandrovich (VNIIA(S), Moscow, Russia), Zhakhovsky V. V., Parshikov A. N., Dyachkov S. A., Grigoryev S. Yu.*
- 18:30 [zoom] PYPHIA: The parallel software platform for fluid dynamics simulations with an efficient load balancing algorithm  
*Dyachkov Sergey Aleksandrovich (VNIIA(S), Moscow, Russia), Grigoryev S. Yu., Muratov R. V., Murzov S. A., Parshikov A. N., Rublev G. D., Zhakhovsky V. V.*
- 18:35 [zoom] Damage distributions in ceramics under different shock loadings  
*Grigoryev Sergey Yurievich (VNIIA(S), Moscow, Russia), Dyachkov S. A., Parshikov A. N., Zhakhovsky V. V.*
- 18:40 [zoom] Modeling heat transfer processes in fractal media at high temperatures  
*Beybalaev Vetlugin Dzhabrailovich (IGRRE JIHT RAS, Makhachkala, Russia), Aliverdiev A. A.*

- 18:45 [zoom] Calculations of the thermal conductivity of fully ionized hydrogen plasma with dynamical screening and degeneracy in electron-electron scattering  
*Karakhtanov Valery Sergeevich (IPCP RAS, Chernogolovka, Russia)*
- 18:50 [zoom] Electrostatics of two dielectric spheres, one of which contains a metal core  
*Rodin Mikhail Maksimovich (JIHT RAS, Moscow, Russia), Filippov A. V.*
- 18:55 [zoom] Nonuniformity of phase state and phase coexistence in a dusty plasma monolayer  
*Nikolaev Vladislav Sergeevich (MIPT, Dolgoprudny, Russia), Timofeev A. V.*
- 19:00 [zoom] On plasma oscillatory confinement under DD and proton–boron fusion  
*Kurilenkov Yuri Konstantinovich (JIHT RAS, Moscow, Russia), Oginov A. V., Tarakanov V.P., Gus'kov S. Yu., Samoylov I. S.*
- 19:05  **SUPPER**
- 20:00–  
23:00 **POSTER SESSION**





## Conference Program, March 4, 2022

### Oral Session 14:30

Chairman

Prof. N. E. Andreev

- 14:30 [zoom] Laser and particle beam interaction with ionized matter and perspectives for fusion energy (plenary)  
*Hoffmann Dieter H H (XJTU, Xi'An, China)*
- 15:00 [zoom] Laser shocks: From elastic-plastic to elastic propagation mode  
*Inogamov Nail Alimovich (ITP RAS, Chernogolovka, Russia), Perov E. A., Zhakhovsky V. V., Shepelev V. V., Petrov Yu. V., Fortova S. V.*
- 15:15 Physical processes of nanoparticle formation at laser ablation in liquid  
*Inogamov N. A., Zhakhovsky V. V., Khokhlov Victor Alexandrovich (ITP RAS, Chernogolovka, Russia)*
- 15:30 Experimentally acquired basic relaxation stages in ultrashort-pulse laser excited diamond  
*Kudryashov Sergey Ivanovich (LPI RAS, Moscow, Russia), Danilov P. A., Stsepuro N. G., Smirnov N. A., Krasin G. K., Chen J., Kovalev M. S., Gulina Yu. S., Kuz'min E. V., Ostrikov S. A.*
- 15:45 Critical self-focusing power in natural and synthetic diamonds  
*Kuzmin Evgeny Viktorovich (LPI RAS, Moscow, Russia), Danilov P. A., Stsepuro N. G., Smirnov N. A., Krasin G. K., Kudryashov S. I., Gulina Y. S., Kovalev M. S.*
- 16:00 Raman random lasing—extremely high conversion efficiency and temperature dependence  
*Shevchenko M. A., Zemskov K. I., Karpov Maxim Alexandrovich (LPI RAS, Moscow, Russia), Kudryavtseva A. D., Maresev A. N., Tcherniega N. V., Umanskaya S. F.*
- 16:15 Reverse deposition of nanoporous titanium oxides by laser ablation of titanium in air  
*Veiko Vadim Pavlovich (ITMOU, Saint-Petersburg, Russia), Gornushkin I. B., Karlagina Yu. Yu., Samokhvalov A. A., Polyakov D. S., Radaev M. M., Odintsova G. V.*

16:30  **COFFEE-BREAK**

Chairman

Prof. V. P. Veiko

- 17:00 Powerful THz generation from thin crystal at multi-TW laser pulses  
*Nazarov Maxim Mikhailovich (NRC KI, Moscow, Russia), Shcheglov P. A., Chaschin M. V., Mitrofanov A. V., Sidorov-Birykov D. A., Margushev Z. Ch., Zheltikov A. M., Panchenko V. Ya.*
- 17:15 Laser accelerated relativistic electrons in high energy density research  
*Andreev Nikolay Evgen'evich (JIHT RAS, Moscow, Russia), Popov V. S., Rosmej O. N.*
- 17:30 [zoom] Modeling of generation of  $K_{\alpha}$  x-ray radiation under vacuum heating of electrons  
*Kostenko Oleg Fedotovitch (JIHT RAS, Moscow, Russia)*
- 17:45 On diagnostic of energy spectrum of accelerated electron bunches by their synchrotron radiation spectrum  
*Veysman Mikhail Efimovich (JIHT RAS, Moscow, Russia), Andreev N. E., Pugachev L. P.*
- 18:00 [zoom] Well collimated high charge electron beams laser acceleration from subcritical plasma  
*Savel'ev Andrei Borisovich (MSU, Moscow, Russia), Gorlova D. A., Tsymbalov I. N., Starodubtseva E. M., Ivanov K. A., Zavorotny A. Yu.*



18:15– Optimization of laser-plasma  $\gamma$ -rays source based upon 100 TW femtosecond laser for radiography  
18:30 applications

*Flegentov Vladimir Alexandrovich (FSUE RFNC-VNIITF, Snezhinsk, Russia), Safronov K. V., Gorokhov S. A., Shamaeva N. N., Tischenko A. S., Fedorov N. A., Kovaleva S. F., Zamuraev D. O., Shamraev A. L., Potapov A. V.*

20:00–  
23:00



**BANQUET**



## Conference Program, March 5, 2022

### Oral Session 14:30

Chairman

Prof. V. G. Sultanov

- 14:30 [zoom] Ultra-intense and ultra-fast laser and the laser-driven particle acceleration in the Shanghai Institute of Optics and Fine Mechanics  
*Leng Yuxin (SIOM CAS, Shanghai, China)*
- 14:45 Laser-induced Brownian motion of emulsion of complex composition droplets  
*Senoshenko Rada Vladimirovna (JIHT RAS, Moscow, Russia), Kononov E. A., Vasiliev M. M., Petrov O. F.*
- 15:00 [zoom] Spatial calibration of scintillator for proton radiography  
*Shilkin Nikolay Sergeevich (IPCP RAS, Chernogolovka, Russia), Mintsev V. B., Yuriev D. S., Kantysyrev A. V., Bogdanov A. V., Panyushkin V. A., Skobliakov A. V., Kolesnikov D. S., Gavrilin R. O., Golubev A. A.*
- 15:15 [zoom] Ab initio calculations for the transport properties of metals within the Boltzmann transport theory: From a one- to two-temperature representation  
*Smirnov Nikolai Aleksandrovich (FSUE RFNC-VNIITF, Snezhinsk, Russia)*
- 15:30 Rapid transformation of solutions into an unstable state as a new way to heat transfer enhancement  
*Volosnikov Dmitriy Vladimirovich (ITP UB RAS, Ekaterinburg, Russia), Povolotskiy I. I., Skripov P. V.*
- 15:45 [zoom] Laser measurements of the Moon: Achievements, problems and prospects  
*Shpekin Michael Ivanovich (KFU, Kazan, Russia), Arkhipova A. A.*
- 16:00 [zoom] Density functional theory for materials properties  
*Stegailov Vladimir Vladimirovich (JIHT RAS, Moscow, Russia)*
- 16:15 [zoom] Molecular dynamics analysis of amorphous ice transformations: Nucleation mechanisms  
*Garkul Anastasiia Alexandrovna (JIHT RAS, Moscow, Russia), Stegailov V. V.*
- 16:30 [zoom] He bubbles diffusion in aluminum: The role of the gas pressure  
*Antropov Aleksandr Sergeevich (JIHT RAS, Moscow, Russia), Stegailov V. V.*

16:45



**COFFEE-BREAK**

Chairman

Prof. O. B. Naimark

- 17:00 Viscosity and flow structure of hydrocarbons in slit pores  
*Pisarev Vasily Vyacheslavovich (HSE, Moscow, Russia)*
- 17:15 Two-phase equilibrium calculation at given moles, volume and temperature based on quasi-Newton optimization  
*Zakharov Stepan Alekseyevich (JIHT RAS, Moscow, Russia), Pisarev V. V.*
- 17:30 [zoom] A new discrete methodology for dynamic fracture simulations of rGO-enriched nanoceramics  
*Borodin Elijah (UoM, Manchester, United Kingdom (Great Britain)), Gutkin M. Yu., Sheinerman A. G.*
- 17:45 Formation of metastable silicide during crystallization of Si–Al nanoparticles  
*Gordeev Ilya Sergeevich (JIHT RAS, Moscow, Russia), Kolotova L. N., Starikov S. V.*

- 18:00 Application of neural network for exchange-correlation functional interpolation  
*Ryabov Alexander Alexandrovich (Skoltech, Moscow, Russia), Zhilyaev P. A.*
- 18:15 The role of the generalized derivative in modeling the microstructural features of a heterogeneous system  
*Mishin Aleksey Vladimirovich (ITAM SB RAS, Novosibirsk, Russia)*
- 18:30 On methods of modeling a non-equilibrium plasmas  
*Vichev Ilya Yurievich (KIAM RAS, Moscow, Russia), Solomyannaya A. D., Grushin A. S., Kim D. A.*
- 18:45 Simulations of nonideal plasmas and warm dense matter by the methods of wave packet dynamics  
*Lavrinenko Ya. S., Morozov Igor Vladimirovich (JIHT RAS, Moscow, Russia), Valuev I. A.*

19:00  **SUPPER**

Chairman

*Dr. I. V. Morozov*

- 20:00 [zoom] Numerical investigation of the two-dimensional vortex in viscous media  
*Fortova Svetlana Vladimirovna (ICAD RAS, Moscow, Russia), Doludenko A. N.*
- 20:15 [zoom] Handling the numerical viscosity of contact SPH method at modelling compressible flows  
*Rublev Georgii Dmitrievich (VNIIA(S), Moscow, Russia), Parshikov A. N., Medin S. A., Dyachkov S. A.*
- 20:30 Comparison of numerical methods and implementation algorithms for the direct numerical simulation in fluid dynamics  
*Korneev Boris Azamatovich (KL Ltd., Moscow, Russia), Zakirov A. V.*
- 20:45 [zoom] Ballistic heat transport in the semi-infinite free end Hooke chain caused by external heat supply associated with intensive laser excitation  
*Liazhkov Sergei Dmitrievich (SPbPU, Saint-Petersburg, Russia)*
- 21:00 [zoom] Interaction of laser radiation with strongly coupled xenon and krypton plasma  
*Zaporozhets Yuri Borisovich (IPCP RAS, Chernogolovka, Russia), Mintsev V. B., Gryaznov V. K., Karakhtanov V. S., Reinholz H., Röpke G.*
- 21:15 Ring dust structures in a stratified glow discharge in a magnetic field  
*Dyachkov Lev Gavriilovich (JIHT RAS, Moscow, Russia), Abdirakhmanov A. R., Bastykova N. Kh., Kodanova S. K.*
- 21:30 [zoom] Macroion effective charge in an asymmetric complex plasma  
*Martynova Inna Aleksandrovna (JIHT RAS, Moscow, Russia), Iosilevskiy I. L.*
- 21:45 Electrostatic interaction of dielectric spheres with significantly different sizes  
*Filippov Anatoly Vasilievich (SRC RF TRINITY, Troitsk, Russia)*
- 22:00 Study of kinetic instabilities in a dense nonequilibrium plasma of a continuous ECR discharge in an open magnetic trap  
*Viktorov Mikhail Evgenevich (IAP RAS, Nizhny Novgorod, Russia), Kiseleva E. M., Izotov I. V., Skalyga V. A.*
- 22:15 Experimental study of a pulsed gas discharge initiated by the electric explosion of metal in the semi-open cylindrical chamber  
*Vlasov Alexander Nikolaevich (RSREU, Ryazan, Russia), Dubkov M. V., Burobin M. A., Cherkasova Yu. V., Nikolaev A. V.*
- 22:30– **CLOSING CEREMONY**
- 23:00 Concluding words by *K. V. Khishchenko, V. G. Sultanov*