

### **Ab initio study of GaN properties using VASP software package**

**Klopov, Mihhail**; Kuusk, Ahto; **Velmre, Enn**; **Udal, Andres** BEC 2004 : proceedings of the 9th Biennial Baltic Electronics Conference : October 3-6, 2004, Tallinn, Estonia 2004 / p. 55-58 : ill

### **Assessing structural bonding aspects of multiband superconductors through impurity-induced local lattice distortions : a case study on MgB<sub>2</sub>**

**Pishtshev, Aleksandr**; **Klopov, Mihhail** International journal of quantum chemistry 2013 / p. 643-650 : ill

### **A comparative study of structural energetics and chemical bonding in Ca-based dielectric materials : an integrated view from first-principles calculations**

Pishtshev, Aleksandr; **Klopov, Mihhail** "Functional materials and nanotechnologies" FM&NT-2012 : 17.-20.04.2012, Riga, Latvia : [abstracts] 2012 / p. 117

### **Comparison of uncertainty relations in quantum mechanics and signal processing**

**Udal, Andres**; **Kukk, Vello**; **Velmre, Enn**; **Klopov, Mihhail** 11th International Conference on Squeezed States and Uncertainty Relations and 4th Feynman Festival : Olomouc, Czech Republic, June 22-26, 2009 2009 / p. 154

### **Comparison of uncertainty relations in quantum mechanics and signal processing [Electronic resource]**

**Udal, Andres**; **Kukk, Vello**; **Velmre, Enn**; **Klopov, Mihhail** 11th International Conference on Squeezed States and Uncertainty Relations and 4th Feynman Festival : Olomouc, Czech Republic, June 22-26, 2009 : conference proceedings 2009 / [16] p. [DVD]

### **Conjoined structures of carbon nanotubes and graphene nanoribbons**

Krasnenko, Veera; Boltruško, Vadim; **Klopov, Mihhail**; Hižnjakov, Vladimir Physica scripta 2014 / p. 1-4 : ill

### **Creation of defects and self-localized vibrations in crystal lattices : effects of long-range and nonlinear forces**

**Klopov, Mihhail**; Haas, Mati; Hižnjakov, Vladimir; Shelkan, A. The 23 General Conference of the Condensed Matter Division of the European Physical Society, Varssavi, 2010 2010 / p. 67

### **Creation of defects and self-localized vibrations in crystals : effects of long-range forces in nonlinear dynamics**

Haas, Mati; Hižnjakov, Vladimir; **Klopov, Mihhail**; Shelkan, A. International Conference : FM&NT : Functional Materials and Nanotechnologies 2011 : University of Latvia, April 5-8 : conference program. Book of abstracts 2011 / p. 173

### **Creation of defects in solids: effect of long-range forces**

Hižnjakov, Vladimir; Haas, Mati; **Klopov, Mihhail**; Šelkan, Aleksander Advances in applied physics and materials science congress : 12.-15.05.2011, Antalya, Turkey. Vol. 1 2011 / p. 467

### **Destabilization criteria of the in-plane Cu c-axis dynamics in cuprate superconductors**

Kristoffel, Nikolai; **Klopov, Mihhail** Europhysics letters 2001 / 5, p. 686-690 : ill <https://iopscience.iop.org/article/10.1209/epl/i2001-00110-7/fulltext/6690.html?doi=10.1209/epl/i2001-00110-7>

### **Dynamical instability of the apex oxygen by the c-bonds compression in YBaCuO**

**Klopov, Mihhail**; Kristoffel, Nikolai Physica C 1998 / p. 261-264

### **Dynamical instability of the chain oxygen with softened bonds in the 123-system**

Kristoffel, Nikolai; **Klopov, Mihhail**; Rubin, P. Journal of low temperature physics 1996 / 314, p. 849-854

### **Dynamical stability of chain oxygen with softened bonds in YBa<sub>2</sub>Cu<sub>3</sub>O<sub>6+x</sub>**

Kristoffel, Nikolai; **Klopov, Mihhail**; Rubin, P. International Conference : Physical and Chemistry of Molecular and Oxide Superconductors, Karlsruhe, August 2-6, 1996 : abstracts 1996

### **Dynamical stability of the chain oxygen with softened bonds in YBa<sub>2</sub>Cu<sub>3</sub>O<sub>6+x</sub>**

Kristoffel, Nikolai; **Klopov, Mihhail**; Rubin, P. International Conference "The Role of Dimensionality in Correlated Electronic Systems", Torino, May 6-25, 1996 : abstracts 1996

### **Effects of long-range forces in nonlinear dynamics of crystals : creation of defects and self-localized vibrations**

Haas, Mati; Hižnjakov, Vladimir; **Klopov, Mihhail**; Shelkan, A. IOP conference series : materials science and engineering 2010 / 1, p. 01245 : ill <https://iopscience.iop.org/article/10.1088/1757-899X/15/1/012045>

### **Electronic and optical properties of magnesium and calcium hydroxides : the role of covalency and many-body effects**

Pishtshev, Aleksandr; Karazhanov, S. Zh.; **Klopov, Mihhail** Joint 12th Russia/CIS/Baltic/Japan Symposium on Ferroelectricity and 9th International Conference Functional Materials and Nanotechnologies : Institute of Solid State Physics, University of Latvia, September 29-October 2, Riga, Latvia : book of abstracts 2014 / p. 258

### **Electronic excitations and self-trapping of electrons and holes in CaSO<sub>4</sub>**

Kudrjavtseva, Irina; **Klopov, Mihhail**; Luštšik, Aleksandr Physica scripta 2014 / p. 1-6 : ill

### **Enhanced mobility of high-frequency discrete breathers in a monatomic chain with odd anharmonicity**

Šelkan, Aleksander; **Klopov, Mihhail**; Hižnjakov, Vladimir Physics letters A 2019 / p. 1893-1896 : ill

<https://doi.org/10.1016/j.physleta.2019.03.025> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Excitons in Mg(OH)<sub>2</sub> and Ca(OH)<sub>2</sub> from ab initio calculations**

Pishtshev, Aleksandr; Karazhanov, S. Zh.; **Klopov, Mihhail** Solid state communications 2014 / p. 11-15 : ill

### **First principle calculations of structural, electronic, optical and thermoelectric properties of tin (II) oxide**

Solola, G. T.; **Klopov, Mihhail**; Akinami, J. O.; Afolabi, T. A. Materials research express 2019 / art. 125915, 8 p. : ill

<https://doi.org/10.1088/2053-1591/ab6384> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **High frequency intrinsic localized modes in solids: an example of metallic Ni**

Hižnjakov, Vladimir; Haas, Mati; **Klopov, Mihhail**; Šelkan, Aleksander Book of abstracts. Programme : 3rd Bilateral Estonian-German Workshop "Strong Nonlinear Vibronic and Electronic Interactions in Solids" : Cottbus, Germany, June 13-15, 2011 2011 / p. 39

### **Influence of Cu<sub>2</sub>S, SnS and Cu<sub>2</sub>ZnSnSe<sub>4</sub> on optical properties of Cu<sub>2</sub>ZnSnS<sub>4</sub>**

Mamedov, D.; **Klopov, Mihhail**; Karazhanov, S. Zh. Materials letters 2017 / p. 70-72 : ill <https://doi.org/10.1016/j.matlet.2017.05.069>

### **Influence of soft modes in the local dynamics of defects (SrTiO<sub>3</sub>)**

Kristoffel, Nikolai; **Klopov, Mihhail** Physica status solidi. B, Basic solid state physics 1989 / p. K119-K121

[https://www.ester.ee/record=b1198778\\*est](https://www.ester.ee/record=b1198778*est)

### **Lattice distortion by impurities in MgB<sub>2</sub>**

**Klopov, Mihhail** Proceedings of the Estonian Academy of Sciences. Physics. Mathematics 2006 / 1, p. 53-57 : ill

<https://www.semanticscholar.org/paper/Lattice-distortion-by-impurities-in-MgB2-Klopov/984ee788c900f470944d06adefafa6c5426da577>

### **Linear local modes induced by intrinsic localized modes in a monoatomic chain**

Hižnjakov, Vladimir; Shelkan, A.; **Klopov, Mihhail**; Kiselev, S.A.; Sievers, A.J. Physical review B 2006 / p. 224302-1 - 114302-5

<https://journals.aps.org/prb/abstract/10.1103/PhysRevB.73.224302>

### **Local dynamics of impurities in perovskites with soft modes**

Kristoffel, Nikolai; **Klopov, Mihhail** International conference "Phonons 89" : abstracts 1989 / p. 131

### **Local dynamics of perovskite ferroelectrics with impurities**

Kristoffel, Nikolai; **Klopov, Mihhail** Seventh International Meeting on Ferroelectricity (IMF-7) : August 28-September 1, 1989 : abstracts 1989 / p. 76

### **Local dynamics of perovskite ferroelectrics with impurities**

Kristoffel, Nikolai; **Klopov, Mihhail** Ferroelectrics Letters Section 1990 / p. 97-102

### **Local dynamics of YBa<sub>2</sub>Cu<sub>3</sub>O<sub>6+x</sub> and O(1)-defect dynamical stability**

Kristoffel, Nikolai; **Klopov, Mihhail** Physical review B, Condensed matter 1996 / 13, p. 9074-9076

### **Local lattice distortions induced by impurities in MgB<sub>2</sub> : an integrated view from first principle calculations**

**Klopov, Mihhail**; Pishtshev, Aleksandr 14th International Density Functional Theory Conference : Ateena, 2011, 29 August - 02 September 2011 / p. 55

### **Localized vibrations in perfect anharmonic lattices : trapping on phonos**

Hižnjakov, Vladimir; Shelkan, A.; **Klopov, Mihhail**; Sievers, A.J. Journal of luminescence 2008 / 5/6, p. 995-997 : ill

<https://www.sciencedirect.com/science/article/abs/pii/S0022231307003316>

### **Materials properties of magnesium and calcium hydroxides from first-principles calculations**

Pishtshev, Aleksandr; Karazhanov, S. Zh.; **Klopov, Mihhail** Computational materials science 2014 / p. 693-705 : ill

### **Modeling of a carbon nanotube junction with ab-initio software VASP**

**Velme, Enn**; **Klopov, Mihhail**; **Udal, Andres** BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 75-78 : ill

### **Modeling of defect formation and self-localized vibrations in solids**

Hižnjakov, Vladimir; Haas, Mati; Šelkan, Aleksander; **Klopov, Mihhail** 2012 Computer Simulation of Radiation Effects in Solids, Santa Fe, New Mexico, USA, June 24-29, 2012 : COSIRES 2012 program book 2012 / p. 24

### **Modeling of photon recycling in GaN-devices**

**Velvre, Enn; Udal, Andres; Klopov, Mihhail** 5th European Conference on Silicon Carbide and Related Materials : book of abstracts : 31 August-4 September 2004, Bologna, Italy 2004 / p. 317-318  
[https://www.researchgate.net/publication/250344144\\_Modeling\\_of\\_Photon\\_Recycling\\_in\\_GaN-Devices](https://www.researchgate.net/publication/250344144_Modeling_of_Photon_Recycling_in_GaN-Devices)

#### **Modeling of photon recycling in GaN-devices**

**Velvre, Enn; Udal, Andres; Klopov, Mihhail** Silicon carbide and related materials 2004 : ECSCRM 2004 : proceedings of the 5th European Conference on Silicon Carbide and Related Materials, August 31-September 4, 2004, Bologna, Italy 2005 / p. 1039-1042 : ill  
[https://www.researchgate.net/publication/250344144\\_Modeling\\_of\\_Photon\\_Recycling\\_in\\_GaN-Devices](https://www.researchgate.net/publication/250344144_Modeling_of_Photon_Recycling_in_GaN-Devices)

#### **Modeling of photon recycling in GaN-devices**

**Velvre, Enn; Udal, Andres; Klopov, Mihhail** Material Science Forum. 483/485 2005 / p. 1039-1042  
[https://www.researchgate.net/publication/250344144\\_Modeling\\_of\\_Photon\\_Recycling\\_in\\_GaN-Devices](https://www.researchgate.net/publication/250344144_Modeling_of_Photon_Recycling_in_GaN-Devices)

#### **Modeling of self-localized vibrations and defect formation in solids**

Hižnjakov, Vladimir; Haas, Mati; Pishtshev, Aleksandr; Šelkan, Aleksander; **Klopov, Mihhail** Nuclear instruments and methods in physics research section B-beam interactions with materials and ato 2013 / p. 91-94 : ill

#### **Prediction of high-frequency intrinsic localized modes in Ni and Nb**

Haas, Mati; Hižnjakov, Vladimir; Šelkan, Aleksander; **Klopov, Mihhail**; Sievers, A.J. Physical review B 2011 / p. 144303-1 - 144303-8 : ill

#### **Quantum mechanical transforms between [hij]- and [kapa]-space as a signal processing problem**

**Udal, Andres; Kuk, Vello; Velvre, Enn; Klopov, Mihhail** BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 71-74 : ill

#### **A role of long-range interaction in ILM properties and defects creation in ionic crystals**

**Klopov, Mihhail**; Hižnjakov, Vladimir; Haas, Mati; Shelkan, A. 13th International Conference on the Applications of Density Functional Fheory in Chemistry and Physics : Lyon, France, 31 August - 4 September 2009 2009 / p. 269

#### **Self-consistent potential of intrinsic localized modes : application to diatomic chain**

Shelkan, A.; Hižnjakov, Vladimir; **Klopov, Mihhail** Physical review B 2007 / p. 134304-1 -134304-6 : ill  
<https://journals.aps.org/prb/pdf/10.1103/PhysRevB.75.134304>

#### **Self-consistent theory of intrinsic localized modes : application to monatomic chain**

Hižnjakov, Vladimir; Shelkan, A.; **Klopov, Mihhail** Physics letters A 2006 / 4/5, p. 393-396  
<https://www.sciencedirect.com/science/article/pii/S0375960106006372>

#### **Solution-mediated inversion of SnSe to Sb<sub>2</sub>Se<sub>3</sub> thin-films**

**Polivtseva, Svetlana**; Kois, Julia; **Kruzhilina, Tatiana; Kaupmees, Reelika; Klopov, Mihhail**; Molaiyan, Palanivel; van Gog, Heleen; van Huis, Marijn A.; **Volobujeva, Olga** Nanomaterials 2022 / art. 2898 <https://doi.org/10.3390/nano12172898> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Standing and moving discrete breathers with frequencies above the phonon spectrum**

Hižnjakov, Vladimir; Haas, Mati; Šelkan, Aleksander; **Klopov, Mihhail** Quodons in mica : nonlinear localized travelling excitations in crystals 2015 / p. 229-245 : ill [http://dx.doi.org/10.1007/978-3-319-21045-2\\_9](http://dx.doi.org/10.1007/978-3-319-21045-2_9)

#### **The Spin-1/2 Heisenberg model on one-third-depleted square lattice: exact diagonalization study**

Rubin, Pavel; Pishtshev, Aleksandr; **Klopov, Mihhail** Journal of the Physical Society of Japan 2020 / art. 034707, 4 p  
<https://doi.org/10.7566/JPSJ.89.034707>

#### **Theory and molecular dynamics simulations of intrinsic localized modes and defect formation in solids**

Hižnjakov, Vladimir; Haas, Mati; Šelkan, Aleksander; **Klopov, Mihhail** Physica scripta 2014 / p. 1-5 : ill

#### **Transverse intrinsic localized modes in monatomic chain and in graphene**

Hižnjakov, Vladimir; **Klopov, Mihhail**; Šelkan, Aleksander Physics letters A 2016 / p. 1075–1081  
<https://doi.org/10.1016/j.physleta.2016.01.011> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

#### **Влияние псевдо-ян-теллеровских примесей на фазовый переход основания**

Kristoffel, Nikolai; **Klopov, Mihhail** Физика твердого тела 1983 / с. 1834-1837 [https://www.ester.ee/record=b1258896\\*est](https://www.ester.ee/record=b1258896*est)

#### **Локальная динамика кристалла SrTiO<sub>3</sub> с дефектами**

**Klopov, Mihhail**; Kristoffel, Nikolai Физика твердого тела 1988 / с. 3357-3361 [https://www.ester.ee/record=b1258896\\*est](https://www.ester.ee/record=b1258896*est)

**Локальная динамика кристаллов BaTiO<sub>3</sub> и SrTiO<sub>3</sub> с точечными дефектами замещения : диссертация на соискание ученой степени кандидата физико-математических наук**

**Клоров, Mihhail** 1990 [https://www.ester.ee/record=b4459466\\*est](https://www.ester.ee/record=b4459466*est)

**Локальная динамика кристаллов BaTiO<sub>3</sub> и SrTiO<sub>3</sub>с точечными дефектами замещения : автореферат ... кандидата физико-математических наук : (01.04.02)**

**Клоров, Mihhail** 1990 [https://www.ester.ee/record=b1224934\\*est](https://www.ester.ee/record=b1224934*est)

**Локальная динамика сегнетоэлектриков с примесными дефектами и проявления мягких мод**

Kristoffel, Nikolai; **Клоров, Mihhail** Тезисы докладов XII Всесоюзной конференции по физике сегнетоэлектриков, т. 1 1989 / с. 112

**Локальная динамика титаната бария с дефектами**

**Клоров, Mihhail**; Kristoffel, Nikolai Физика твердого тела 1989 / с. 321-322 [https://www.ester.ee/record=b1258896\\*est](https://www.ester.ee/record=b1258896*est)

**Локальная динамика титанатов Sr и Ba с дефектами**

Kristoffel, Nikolai; **Клоров, Mihhail** Четырнадцатое Всесоюзное (Пекаровское) совещание по теории полупроводников, Донецк, 3-5 октября 1989 г : тезисы докладов 1989 / с. 141

**Термозонд для определения типа проводимости примесных полупроводников**

**Gavrilov, Aleksei; Клоров, Mihhail** Приборы и техника эксперимента 1995 / 3, с. 199-200: ил