

## CURRICULUM VITAE

**Name:** Ulyanov Maxim

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### **Education:**

2006-2010 – Chelyabinsk State University, Faculty of Physics (2010 - Bachelor's degree of physics in the branch of "Physics")

2010-2012 – Chelyabinsk State University, Faculty of Physics (2012 - Master's degree of physics in the branch of "Physics")

2012-2016 – Chelyabinsk State University, postgraduate student (2016 – postgraduate degree, candidate of physico-mathematical sciences)

### **Career/Employment:**

February 2020 - current – International Research Center “Coherent X-ray optics for Mega-science facilities”, Immanuel Kant Baltic Federal University

Post: researcher.

August 2019 - current – Chelyabinsk State University

Post: head researcher.

Scientific research in the field of materials science.

September 2018 - current – South-Ural State University (National Research University)

Post: laboratory assistant-researcher.

Scientific research in the field of materials science.

March 2017 - January 2020 – Physics faculty, Chelyabinsk State University

Post: assistant professor.

Disciplines – «Mechanics», «Molecular physics and thermodynamics», «Electricity and Magnetism» and «Optics».

March 2017 - January 2020 – Chelyabinsk State University

Post: head inspector to control the execution of orders of the Dean of the Faculty of Physics.

February 2019 - August 2019 – department "Russian as a foreign language" of the Institute of International Education, Chelyabinsk State University

Post: assistant professor.

Discipline – "Physics for foreigners"

2015 - 2019 (summer period) – children's complex «Abzakovo»

Position: teacher of additional education

Work with gifted children in physics, preparation for olympiads.

February 2017 - August 2018 – department "Russian as a foreign language" of the Institute of Linguistics and International Relations, South-Ural State University (National Research University)  
Post: assistant professor.  
Discipline – "Physics for foreigners".

September 2017 - August 2018 - "Lyceum 97"  
Position: physics teacher.

June 2014 - December 2017 – Chelyabinsk State University  
Post: laboratory assistant-researcher.  
Scientific research in the field of materials science.

September 2014 - January 2015 – Physics faculty, Chelyabinsk State University  
Post: lecturer.  
Disciplines – "Electronics and Circuit Engineering", "Software and hardware means for ensuring information security" and "Systems and networks of transfer information".

January 2010 - June 2015 – Chelyabinsk State University  
Post: lecturer.  
Carrying out of courses for schoolboys of 10-11 classes to EGE on the physicist.

December 2011 - December 2013 – State Regional Television and Radio Company "Regional TV"  
Posts: engineer.  
Provision of broadcasts from the hockey matches of the teams "Tractor", "Mechel", "Chelmet", European Championships in Judo 2012 (Chelyabinsk), KHL all stars game 2013 (Chelyabinsk), the Governor's Cup for the ballroom dances of 2013, concerts of Denis Matsuev 2012 and 2013, performances from the Theater of Opera and Ballet M.I. Glinka and the Drama Theater N. Orlov and other various concerts and events.

December 2011 - June 2014 – LLC "Innovative technologies of the construction industry"  
Post: electronic engineer.  
Scientific research in the field of natural and technical sciences; Production of products from concrete, cement, gypsum.

#### **Scientific interests:**

Magnetocaloric effect, magnetism and magnetic materials, permanent magnets, severe plastic deformation, magnetic refrigeration

#### **Grants and awards:**

The co-investigator of the RFFI grants (№ 12-07-00676 and № 16-07-00679), the grant of the President of the Russian Federation (№ MD-770.2014.2), the grant of the RSF (№ 15-12-10008) and Russian Science Foundation-Helmholtz (№ 18-42-06201).

The head of grant of the RSF (№ 19-72-00047).

The head of the grants of the Fund for Support of Young Scientists of Chelyabinsk State University (2015, 2018).

2015 - Scholarship of the Legislative Assembly of the Chelyabinsk region.

2014 – the laureate scholarship of the Administration of Chelyabinsk for success in studies, scientific and social activities.

2014 - the laureate of personal scholarship of Doctor of Physical and Mathematical Sciences, Professor Georgy Vasilyevich Kleshchev for scientific achievements.

## Organizing work:

- Member of the Local Committee of International Conference “Phase transitions, critical and nonlinear phenomena in condensed matter” (PTCNPCM2015), August 24-28, 2015, Chelyabinsk, Russia.
- Member of the Scientific Committee of 26th All-Russian Scientific Conference of Students Physicist and Young Scientists “VNKSF-26”, March 27-April 3 → November 20-27, 2020, Ufa-Magnitogorsk,

## Publications:

1. С.В. Таскаев, М.Н. Ульянов, Д.С. Батаев, В.В. Ховайло, К.П. Скоков, А.П. Пелленен, А.Н. Васильев, О.С. Волкова. Магнитные свойства редкоземельных металлов Nd и Sm, подвергнутых интенсивной пластической деформации. VI Международная школа-конференция для студентов, аспирантов и молодых ученых «Фундаментальная математика и ее приложения в естествознании», сборник трудов, том 2. Физика. Научные статьи. Уфа 2013 г., стр. 182-188.
2. S. Taskaev, K. Skokov, D. Karpenkov, V. Khovaylo, V. Buchelnikov, D. Zherebtsov, M. Ulyanov, D. Bataev, M. Drobosyuk, A. Pellenen. Magnetocaloric properties of severe plastic deformed  $Gd_{100-x}Y_x$  alloys. *Acta Physica Polonica A* **127** (2015) 641-643.
3. Sergey Taskaev, Konstantin Skokov, Dmitry Karpenkov, Vladimir Khovaylo, Vasilii Buchelnikov, Dmitry Zherebtsov, Maxim Ulyanov, Dmitry Bataev, Anatoly Pellenen, Alfiya Fazlitdinova. The influence of cold rolling on magnetocaloric properties  $Gd_{100-x}Y_x$  ( $x = 0, 5, 10, 15$ ) alloys.
4. Sergey Taskaev, Konstantin Skokov, Dmitry Karpenkov, Vladimir Khovaylo, Vasilii Buchelnikov, Dmitry Zherebtsov, Maxim Ulyanov, Dmitry Bataev, Damir Galimov, Anatoly Pellenen. Magnetocaloric properties of cold rolled  $Gd_{100-x}Zr_x$  ( $x = 0, 1, 2, 3$ ) intermetallic alloys. *Solid State Phenomena* **233-234** (2015), 220-224.
5. S. Taskaev, K. Skokov, V. Khovaylo, V. Buchelnikov, A. Pellenen, D. Karpenkov, M. Ulyanov, D. Bataev, A. Usenko, M. Lyange and O. Gutfleisch. Effect of severe plastic deformation on the specific heat and magnetic properties of cold rolled Gd sheets. *Journal of Applied Physics* **117**, 123914 (2015).
6. Sergey Taskaev, Konstantin Skokov, Dmitry Karpenkov, Vladimir Khovaylo, Maxim Ulyanov, Dmitry Bataev, Anatoliy Pellenen, Alfiya Fazlitdinova. The effect of plastic deformation on magnetic and magnetocaloric properties of  $Gd_{90}Ga_{10}$  alloys. *Materials Science Forum*, **845** (2016) 56-60.
7. E. M. Semenova, M. B. Lyakhova, A. I. Ivanova and M. N. Ulyanov. Micro- and nanostructures of RCoCuFeZr heterogeneous alloys with high temperature stability. *Materials Science Forum*, **845** (2016) 46-49.
8. Taskaev S., Khovaylo V., Skokov K., Pellenen A., Karpenkov D., Ulyanov M., Gutfleisch O. Magnetocaloric effect in severe plastic deformed Gd-X ( $X = In, Ga, V, Y, Zr$ ). *Refrigeration Science and Technology Proceedings (Thermag VII), 7th International Conference on Magnetic Refrigeration at Room Temperature, 11-14 September, 2016, Torino, Italy*, pp. 99-102.
9. М. Ульянов, К. Скоков, Д. Карпенков, В. Ховайло, В. Бучельников, Д. Жеребцов, Д. Батаев, М. Дробосюк, А. Пелленен, А. Фазлитдинова, С. Таскаев. Магнитные и магнитокалорические свойства интерметаллидов  $Gd_{100-x}Zr_x$  ( $x=0..3$ ), подвергнутых интенсивной пластической деформации. *ФАЗОВЫЕ ПЕРЕХОДЫ, МЕЖФАЗНЫЕ ГРАНИЦЫ И НАНОМАТЕРИАЛЫ*, **4** (2016) 44-48.
10. Таскаев С.В., Скоков К.П., Ховайло В.В., Карпенков Д.Ю., Ульянов М.Н., Батаев Д.С. Пластически деформированные твердые растворы Gd-X ( $X = In, Ga, V, Y, Zr$ ) как перспективные материалы для магнитного охлаждения. *Сборник трудов XII международного семинара «Магнитные фазовые переходы», Институт физики ДНЦ РАН, с.25-28, 2017.*
11. Таскаев С.В., Скоков К.П., Ховайло В.В., Карпенков Д.Ю., Ульянов М.Н., Батаев Д.С. Магнитные свойства пластически деформированных ферромагнитных лантаноидов: Dy и Tb.

Сборник трудов XII международного семинара «Магнитные фазовые переходы», Институт физики ДНЦ РАН, с.62-65, 2017.

12. Sergey Taskaev, Konstantin Skokov, Dmitry Karpenkov, Vladimir Khovaylo, Maxim Ulyanov, Dmitriy Bataev, Alexandr Dyakonov, Alfiya Fazlitdinova, Oliver Gutfleisch. The effect of plastic deformation on magnetic and magnetocaloric properties of Gd-B alloys. *Journal of Magnetism and Magnetic Materials*, **442** (2017) 360-363.

13. S. Taskaev, K. Skokov, V. Khovaylo, D. Karpenkov, M. Ulyanov, D. Bataev, A. Dyakonov, and O. Gutfleisch. Effects of severe plastic deformation on the magnetic properties of terbium. *AIP ADVANCES*, **8** (2018) 048103.

14. Taskaev S., Skokov K., Khovaylo V., Ulyanov M., Bataev D., Karpenkov D., Radulov I., Dyakonov A., Gutfleisch O. Magnetocaloric effect in cold rolled foils of  $Gd_{100-x}In_x$  ( $x = 0, 1, 3$ ). *Journal of Magnetism and Magnetic Materials*, **459** (2018) 46-48.

15. S. Taskaev, V. Khovaylo, D. Karpenkov, I. Radulov, M. Ulyanov, D. Bataev, A. Dyakonov, D. Gunderov, K. Skokov, O. Gutfleisch. Plastically deformed Gd-X ( $X = Y, In, Zr, Ga, B$ ) solid solutions for magnetocaloric regenerator of parallel plate geometry. *Journal of Alloys and Compounds*, **754** (2018) 207-214.

16. Sergey Taskaev, Konstantin Skokov, Dmitry Karpenkov, Vladimir Khovaylo, Maxim Ulyanov, Dmitriy Bataev, Alexander Dyakonov, Oliver Gutfleisch. Influence of severe plastic deformation on magnetocaloric effect of dysprosium. *Journal of Magnetism and Magnetic Materials*, **479** (2019) 307-311.

17. D.A. Kalganov, M.S. Gryaznova, I.V. Bychkov, E.A. Belaya, M.N. Ulyanov. SYNTHESIS AND HIGH-FREQUENCY PROPERTIES OF BISMUTH FERRITE NANOPARTICLES. *Chelyabinsk Physical and Mathematical Journal*, **4:4** (2019) 481-486.

18. Sergey Taskaev, Vladimir Khovaylo, Maxim Ulyanov, Dmitriy Bataev, Ekaterina Danilova, Danil Plakhotskiy. Low temperature magnetocaloric materials for cryogenic gas liquefaction by magnetic cooling technique. *Key Engineering Materials*, **833** (2020) 176-180.

19. Sergey. V. Taskaev, Maxim. N. Ulyanov, Dmitriy. V. Gunderov and Mikhail Yu. Bogush. Magnetic Properties of Ternary Fe-Ni-Ti Alloys After Severe Plastic Deformation. *IEEE Magnetics Letters*, **11** (2020) 7502805.

20. Sergey Taskaev, Vladimir Khovaylo, Konstantin Skokov, Wei Liu, Eduard Bykov, Maxim Ulyanov, Dmitriy Bataev, Anastasiya Basharova, Marina Kononova, Daniil Plakhotskiy, Mikhail Bogush, Tino Gottschall, Oliver Gutfleisch. Magnetocaloric Effect in  $GdNi_2$  for Cryogenic Gas Liquefaction Studied in Magnetic Fields up to 50 T. *Journal of Magnetism and Magnetic Materials* (in print).