

## Maxim V. Pyatnov

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**Date of birth:** 11 July 1992

**Degree:** PhD in physical and mathematical sciences

**Organization:** Laboratory for molecular systems photonics, Kirensky Institute of Physics

**Position:** Junior Researcher

**Organization:** Department of experimental physics and innovation technology, Institute of engineering physics and radioelectronics, Siberian Federal University

**Position:** Assistant Professor

**Organization:** Laboratory of nanotechnology, spectroscopy and quantum chemistry, Siberian Federal University

**Position:** Junior Researcher

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**Researchgate:** [https://www.researchgate.net/profile/Maxim\\_Pyatnov](https://www.researchgate.net/profile/Maxim_Pyatnov)

**Scopus:** <https://www.scopus.com/authid/detail.uri?authorId=55851617600>

**Google Scholar:** <https://scholar.google.ru/citations?user=K-sp8k4AAAAJ>

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**RESEARCH INTERESTS:** Photonics, Optics of liquid crystals, Photonic band gap materials.

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### EDUCATION

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2015 – 2019:	PhD Student, Siberian Federal University, Optics
2013 – 2015:	Master of Science, Siberian Federal University, Technical physics: Optical physics and quantum electronics (GPA: 5.0 out of 5.0)
2009 – 2013:	Bachelor of Science, Siberian Federal University, Nanotechnology, (GPA: 5.0 out of 5.0)

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### WORK EXPERIENCE

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Since 2019:	Assistant Professor, Department of experimental physics and innovation technology, Siberian Federal University
Since 2019:	Junior Researcher, Kirensky Institute of Physics
Since 2018:	Junior Researcher, Laboratory of nanotechnology, spectroscopy and quantum chemistry, Siberian Federal University
2017 – 2018	Junior Researcher, Institute of nanotechnology, spectroscopy and quantum chemistry, Siberian Federal University
2017–2019:	Teaching Assistant, Department of experimental physics and innovation technology, Siberian Federal University
2014–2016:	Research Engineer, Siberian Federal University

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## HONORS AND ACHIEVEMENTS

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- Medal of the Russian Academy of Sciences for students (2015)
  - Scholarship of the Russian Federation President for students (2014/15, 2017/18, 2018/19)
  - Scholarship of the Russian Government for students (2014/15, 2016/17)
  - State Award of Krasnoyarsk Krai for PhD students (2016)
  - Award from the Head of Krasnoyarsk city for students (2015)
  - Scholarship of the Krasnoyarsk Krai for students (2013)
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## RESEARCH GRANTS

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- "Tunable Tamm plasmon polaritons and metasurfaces for topological photonics", Russian-Taiwanese Joint Research Project, Russian Foundation for Basic Research (RFBR) No. 19-52-52006 and Ministry of Science and Technology of Taiwan, 2019-2021. – Member.
  - "Localized and hybrid modes of photonic crystal structures based on structurally chiral and resonant nanocomposite media", RFBR No. 18-42-243025, 2018-2019. - Head
  - "Optical Tamm states on the boundary of a photonic crystal containing anisotropic nanostructures", RFBR No. 17-42-240464, 2017-2018. – Member.
  - "Propagation of electromagnetic waves in one- and two-dimensional micro- and nanostructured media containing resonant and anisotropic materials", The Ministry of Education and Science of the Russian Federation (No. 3.1276 / K), 2014-2016. – Member.
  - "Propagation of electromagnetic waves in photonic crystal structures containing resonant and anisotropic materials", RFBR No. 14-02-31248, 2014-2015. – Member.
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## LIST OF JOURNAL PAPERS

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1. N.V. Rudakova, I. V. Timofeev, R.G. Bikbaev, M. V. Pyatnov, S. Ya. Vetrov, and W. Lee "Chiral optical Tamm states at the interface between an all-dielectric polarization-preserving anisotropic mirror and a cholesteric liquid crystal", *Crystals* **9**, 502 (2019). – *WoS, Scopus*
  2. M. V. Pyatnov, S. Ya. Vetrov, I. V. Timofeev and N.V. Rudakova, "Coupled chiral optical Tamm states in cholesteric liquid crystals", *Photonics* **5**, 30 (2018). – *WoS, Scopus*
  3. M. V. Pyatnov, S. Ya. Vetrov, and I. V. Timofeev, "Tunable hybrid optical modes in a bounded cholesteric liquid crystal with the twist defect", *Phys. Rev. E* **97**, 032703 (2018). – *WoS, Scopus*
  4. M. V. Pyatnov, S. Ya. Vetrov, and I. V. Timofeev, "Localized optical modes in a defect-containing liquid-crystal structure adjacent to the metal", *J. Opt. Soc. Am. B.* **34**, 2011 (2017). – *WoS, Scopus*
  5. M. V. Pyatnov, S. Ya. Vetrov, and I. V. Timofeev, "Localized optical states in a liquid-crystal structure adjacent to a metal", *Opt. and Spectr.* **123**, 183 (2017). – *WoS, Scopus*
  6. M. V. Pyatnov, S. Ya. Vetrov, and I. V. Timofeev, "Localised optical states in a structure formed by two oppositely handed cholesteric liquid crystal layers and a metal", *Liq. Cryst.* **44**, 674 (2017). – *WoS, Scopus*
  7. S. Ya. Vetrov, M. V. Pyatnov, and I. V. Timofeev, "Spectral and polarization properties of a 'cholesteric liquid crystal—phase plate—metal' structure", *Journal of Optics* **18**, 015103 (2016). – *WoS, Scopus*
  8. M. V. Pyatnov, S. Ya. Vetrov, and I. V. Timofeev, "Controlled Photonic Surface Modes in 'Cholesteric Liquid Crystal—Phase Plate—Metal' Structure", *PIERS Proceedings 2015*, 25 (2015). – *Scopus*
  9. S. Ya. Vetrov, M. V. Pyatnov, and I. V. Timofeev, "Photonic defect modes in a cholesteric liquid crystal with a resonant nanocomposite layer and a twist defect", *Phys. Rev. E* **90**, 032505 (2014). – *WoS, Scopus*
  10. S. Ya. Vetrov, M. V. Pyatnov, and I. V. Timofeev, "Surface modes in "photonic cholesteric liquid crystal—phase plate—metal" structure", *Opt. Lett.* **39**, 2743 (2014). – *WoS, Scopus*
  11. M. V. Pyatnov, "Evolution of Polarization in an Anisotropic Nanocomposite with Resonance Dispersion", *Rus. Phys. J.* **57**, 585 (2014). – *WoS, Scopus*
  12. S. Ya. Vetrov, M. V. Pyatnov, and I. V. Timofeev, "Specific features of the spectral properties of a cholesteric liquid crystal with a resonance defective nanocomposite layer", *Phys. of the Sol. State* **55**, 1697 (2013). – *WoS, Scopus*
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## LIST OF INTERNATIONAL AND NATIONAL CONFERENCES

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1. The 4th Asian Conference on Liquid Crystals. – Shenzhen, China – 17-18 January 2019.
  2. 27th International Liquid Crystal Conference. – Kyoto, Japan – 22-27 July 2018.
  3. 14th European Conference on Liquid Crystals. – Moscow, Russia – 25-30 June 2017.
  4. 6th Workshop on Liquid Crystals for Photonics. – Ljubljana, Slovenia – 14-16 September 2016.
  5. Progress in Electromagnetic research symposium. – Prague, Czech Republic – 6-9 July 2015.
  6. International conference «Fundamental problems in Optics – 2016» – St. Petersburg, Russia – 17-21 October 2016.
  7. International conference of young scientist «Optics-2015» – St. Petersburg, Russia 12-16 October 2015
  8. XV All-Russian school-seminar " Physics and applications of microwaves " («Waves-2015») – Moscow, Russia 1-6 June 2015
  9. XII All-Russian Youth Samara Competition-Conference of Scientific Works on Optics and Laser Physics. – Samara, Russia – 12-15 November 2014
  10. International conference «Fundamental problems in Optics – 2014». – St. Petersburg, Russia – 20-24 October 2014.
  11. XIV All-Russian school-seminar "Wave phenomena in inhomogeneous media" («Waves-2014») – Moscow, Russia 26-31 May 2014
  12. International conference «Fundamental problems in Optics – 2012» – St. Petersburg, Russia – 15-19 October 2012.
  13. The First All-Russian Conference on Liquid Crystals. – Ivanovo, Russia – 17-21 September 2012.
  14. XVIII All-Russian scientific conference of students-physicists and young scientists. – Krasnoyarsk, Russia – 29 March - 5 April 2012
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