**Sergey Makarov**

*ITMO University*

*Date of birth: 25 April 1988*

*Place of birth: Vladivostok, Russia*

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**Education:**

**2005-2008:** Far East Federal University (Vladivostok);

**2008-2011**: National Research Nuclear University “MEPhI”, Moscow, Russia

Specialty: Solid state physics and photonics.

**2011 – 2014** PhD in P.N. Lebedev Physics Institute (LPI) of the Russian Academy of Sciences (Moscow).

**2018** **–** Habilitation (Doctor of Sciences) in ITMO University (St Petersburg, Russia).

**Job experience:**

### 04.2008 – 12.2008: **Assistant** in laboratory of NRNU “MEPhI” (Moscow, Russia)

### 05.2013 – 09.2013 and 08.2014: **Visiting researcher** in Vienna University of Technologies (Vienna, Austria).

09.2011 – 01.2015**: Research Assistant** in P.N. Lebedev Physics Institute (LPI) of the Russian Academy of Sciences (Moscow, Russia).

### 01.2015-03.2017: **Postdoc** in ITMO University (Saint Petersburg, Russia).

### Since 03.2017 **Head of Laboratory** of Hybrid Nanophotonics and Optoelectronics in ITMO University (Saint Petersburg, Russia).

### 05.2019-06.2019: **Visiting Professor** at University of Lorraine (Nancy, France)

### since 01.2020: **Professor** of Department of Physics and Engineering at ITMO University (Saint Petersburg, Russia).

### **Research areas**:

Nanophotonics, halide perovskites, nanoscience, nanolasers, laser-matter interaction, ultrafast and nonlinear phenomena at nanoscale.

### **Visiting scholar:**

### **Australian National University** (Australia) group of Prof. Yuri Kivshar

### **Texas University at Dallas** (USA) group of Prof. Anvar Zakhidov

### **Laser Zentrum Hannover** (Germany) group of Prof. Boris Chichkov

### **City University of New York** (USA) group of Prof. Alexander Khanikaev

**Honors and Awards:**

**2021 - *Research Excellence Award Russia, Scopus***

**2020 – *Award of the President of the Russian Federation*** *in the field of science and innovation for young scientists* (the most prestigious award for scientists younger than 35 years and given by President personally, 80 kUSD**,**<http://www.kremlin.ru/events/president/news/62716>**).**

**2019 - *Medal of Russian Academy of Sciences for Young Researchers* in Physics (**<http://yras-goldmedal.ru/>)**,**

**2019 - *President’s of Russian Federation Grant*** for perovskite solar cells with nanostructures (15 kUSD, the award was given the Gubernator of Saint Petersburg Personally).

**2018 - Winner of competition for *Invited Professor Position* at University of Lorraine in France;**

**2016 - *Alferov’s Foundation Medal for Young Researchers* (5 kUSD, younger than 33 years,**<http://alferov-fond.ru/2016>, the award was given by Nobel Laureate Prof. Alferov personally)**,**

**2016 - *Saint-Petersburg Government Award* in the field of technology** (5 kUSD, the award was given by the Gubernator of Saint Petersburg Personally)**,**

**2015 - *President’s of Russian Federation Scholarship***,

**2014 - *Fellowship* *of ITMO University* (**<https://fellowship.itmo.ru/>)**,**

**2014 and 2012 - *N.G. Basov’s name awards for young researches*** in laser physics,

2012 - ***President’s of Russian Federation Scholarship for Students to Study Abroad***,

2012 - ***Award related to N.G. Basov 90-years anniversary***,

2011 - ***SPIE Scholarship in Optics and Photonics*,**

2011 - ***Winner of Scholarship of Foundation for Promotion of Small companies in Science and Technology***,

2007 - ***Gubernatorial Scholarship for excellent studying*** (Vladivostok, Russia).

**Grants:**

Received as a PI or co-PI seven Russian research grants with a total budget around 7M USD (for the period 2015-2025).

**Teaching:** Lectures within the course “Experimental methods in nanophotonics” (1 semester, MS).

**Mentoring:**

**PhD thesis advisor of 5 students:**Georgy Zograf (2017-2020), Tatiana Liashenko (2018-2020), Ekaterina Tiguntseva (2017-2021), Alexander Berestennikov (2017-2021), Alexandra Furasova (2017-2021), Pavel Tonkaev (2018-2022).

**Mentored** more than 7 Master students.

**Invited University Seminars, Colloquia and Lectures:**

**Stanford University** (USA), Geballe Laboratory for Advanced Materials – May 2019

**Denmark Technical University** (Denmark), Department of Photonics Engineering – May 2019

**Texas University at Dallas** (USA), NanoTech Institute – May 2019

**Johannes Kepler University Linz** (Austria), Institute of Physical Chemistry – March 2019

**Sejong University** (Korea), Department of Physics and Astronomy – August 2018

**RIKEN** (Tokyo, Japan), Theoretical Quantum Physics Laboratory - August 2018

**City University of Hong Kong** (SAR Hong Kong), Centre for Functional Photonics – December 2017

**Chalmers University of Technology** (Sweden), Department of Physics – November 2017

**ETH Zurich** (Switzerland), Optical Nanomaterial Group – April 2017

**EPFL** (Switzerland), BioEngineering Department – April 2017

**University of Virginia** (USA), Department of Materials Science and Engineering – April 2016

**City University of New York** (USA), Physics Department – April 2016

**Texas University at Austin** (USA), Department of Electrical and Computer Engineering – March 2016

**INVITED CONFERENCE TALKS:**

1. Invited MRS Fall Meeting (Boston, USA, 2021, online)
2. Invited - AAAFM UCLA (California, USA, 2021) (<https://aaafm.org/ucla2021/invited-speakers/> )
3. Advanced Laser Technologies (Moscow, Russia, 2021) (<https://altconference.org/alt21>)
4. Invited - International Workshop on Advanced Display Materials (Hong Kong, 2021)<http://adw.ust.hk/>
5. Invited – MAPPIC 2020 (Moscow, Russia, 2020,<http://nmse-lab.ru/index.php/en/mappic-en> )
6. **Keynote** – BIC-FM 2020 (Moscow, Russia, 2020,<http://bic-fm.skoltech.ru/>)
7. **Plenary** – Ultrafast Light 2020 (Moscow, Russia, 2020,<https://ultrafastlight.ru/plenary-speakers.html> )
8. Invited – FLAMN-2019 (St Petersburg, Russia, 2019,<https://flamn.ifmo.ru/> )
9. Invited – POEM2019 (London, UK, April 2019)<https://www.poem2019.com/speakers>
10. Invited – Photonics West (Section: “Colloidal Nanoparticles for Biomedical Applications XIV”, San Francisco, 2019)<https://spie.org/PWB/conferencedetails/colloidal-nanoparticles-biomedical-applications>
11. Invited – Nanomaterials Trends - Hybrid nanocomposites and nanogranular materials (Brescia, Italy, 2018,<https://brescia.unicatt.it/eventi/evt-nanomaterialstrends-hybrid-nanocomposites-and-nanogranular-materials> )
12. Invited – METANANO’2018 (Sochi, Russia, 2018,<https://metanano.ifmo.ru/2018/> )
13. **Plenary** – ICNMP-2018 (Santiago de Cuba, Cuba, 2018, [http://interconf.pro](http://interconf.pro/) )
14. Invited – STRANN-2016 (St Petersburg, Russia, 2016,<http://www.strann.org/> )
15. Invited – FLAMN-2016 (St Petersburg, Russia, 2016,<http://lpc.ifmo.ru/flamn16/> )
16. Invited – PIERS-2013 (Stockholm, Sweden, 2013,<http://www.piers.org/piers2013Stockholm/>)
17. Invited – PIERS-2012 (Kuala Lumpur, Malaysia, 2012,<http://www.piers.org/piers2012kualalumpur/>)

**Editor in journals:**

Opto-Electronic Advances (IF=9.6, Associated Editor), Advanced Photonics Research (Advisory Board Member), ACS Materials Au (Advisory Board Member).

**Referee in journals:**

Advanced Materials, Materials Today, ACS Nano, Nature Communications, Advanced Functional Materials, Nano Letters, Small, Angewandte Chemie, Laser&Photonics Reviews, Nanoscale, ACS Photonics, Nanophotonics, etc.

**Referee for grant agencies:**

1. European Research Council (since 2021) <https://erc.europa.eu/>
2. Swiss National Science Foundation (since 2021) <https://www.snf.ch/en>
3. United States – Israel Binational Science Foundation (since 2021) <https://www.bsf.org.il/>
4. Russian Science Foundation (since 2017)<http://rscf.ru/en>
5. Czech Science Foundation (since 2019)<https://gacr.cz/en/>
6. Ministry of Higher Education of Russian Federation (since 2019)<https://p220.ru/en/>
7. International Fund of Technological Development (since 2020)<https://xn--l1aifh.xn--p1ai/en/> - industrial grants for > 10M USD.

**Conference and School organizer:**

***Permanent Chair*** of School on Advanced Light-Emitting and Optical Materials (“SLALOM”, since 2019,<https://slalom.physics.itmo.ru/>)

***Chair*** of Program Committee of International Conference “METANANO’17” (Vladivostok, Russia 2017)<https://metanano.ifmo.ru/2017/>

Member of Program Committee of International Conference “PLMCN-20” (Moscow, Russia 2019)<https://events.mifp.eu/PLMCN-2019/>

Member of Program Committee of International Conference “METANANO’18” (Sochi, Russia 2018)<https://metanano.ifmo.ru/2018/>

Organizer of Special Section (with Prof. Rogach and Prov. Zakhidov) as well as Member of Program Committee of International Conference “METANANO’19” (St Petersburg, Russia 2019)<https://metanano.ifmo.ru/2019/>

**Languages:** English – fluent, Russian – native

**MAJOR publications**

**(find more papers at**<https://scholar.google.com/citations?user=9sE8LrMAAAAJ&hl=en>**):**

1. D.A. Zuev, S.V. Makarov, V.A. Milichko, S.V. Starikov, I.S. Mukhin, I.A. Morozov, I. I Shishkin, A. E Krasnok, P. A Belov «Fabrication of Hybrid Nanostructures via Nanoscale Laser‐Induced Reshaping for Advanced Light Manipulation» **Advanced Materials** 28(16), 3087–3093 (2016)<http://onlinelibrary.wiley.com/doi/10.1002/adma.201505346/abstract> [Impact Factor= **30.849**]
2. V. A. Milichko, S.V. Makarov, A. V. Yulin, A.V. Vinogradov, A.A. Krasilin, E. Ushakova, and P.A. Belov, “van der Waals Metal‐Organic Framework as an Excitonic Material for Advanced Photonics”. **Advanced Materials** 29(12), 1606034 (2017)<http://onlinelibrary.wiley.com/doi/10.1002/adma.201606034/full> [IF= **30.849**]
3. Georgiy Zograf, Mihail Petrov, Sergey Makarov, Yuri Kivshar “All-dielectric thermonanophotonics” **Advances in Optics and Photonics** 13, 643 (2021) [DOI: 10.1364/aop.426047 ] [ IF= **20.107** ]
4. A.Berestennikov, P.Voroshilov, S.Makarov, Y.Kivshar “Active meta-optics and nanophotonics with halide perovskites” **Applied Physics Reviews** 6(3), p.031307 (2019)<https://aip.scitation.org/doi/10.1063/1.5107449> [IF= **21.43**] (*selected as ‘Featured Article’*)
5. J. Ye, D. Zuev and S. Makarov «Dewetting mechanisms and their exploitation for the large-scale fabrication of advanced nanophotonic systems» **International Materials Reviews** 64(8), 439–477 (2019)<https://doi.org/10.1080/09506608.2018.1543832> [IF = **21.086**]
6. A. Furasova, P. Voroshilov, G.Baranov, P. Tonkaev, A. Nikolaeva, K. Voronin, L. Vesce, S. Makarov, Aldo Di Carlo “Mie-resonant mesoporous electron transport layer for highly efficient perovskite solar cells” **Nano Energy** 106484, (2021) [DOI: 10.1016/j.nanoen.2021.106484] [IF = **17.881** ]
7. A. Zhizhchenko, S. Syubaev, A. Berestennikov, A.V. Yulin, A. Porfirev, A. Pushkarev, I. Shishkin, K. Golokhvast, A.A. Bogdanov, A.A. Zakhidov, A.A. Kuchmizhak, Y.S. Kivshar, S.V. Makarov “Single-Mode Lasing from Imprinted Halide-Perovskite Microdisks” **ACS Nano** 13(4), 4140-4147 (2019)<https://pubs.acs.org/doi/10.1021/acsnano.8b08948> [IF= **15.881**]
8. Paolo Franceschini, Luca Carletti, Anatoly Pushkarev, Fabrizio Preda, Antonio Perri, Andrea Tognazzi, Andrea Ronchi, Gabriele Ferrini, Stefania Pagliara, Francesco Banfi, Dario Polli, Giulio Cerullo, Costantino De Angelis, Sergey Makarov, Claudio Giannetti «Tuning the Ultrafast Response of Fano Resonances in Halide Perovskite Nanoparticles» **ACS Nano**, 4 (10), 13602-13610 (2020) [DOI: 10.1021/acsnano.0c05710] [IF= **15.881**]
9. Fedorov, V.V., Bolshakov, A., Sergaeva, O., Neplokh, V., Markina, D., Bruyere, S., Saerens, G., Petrov, M.I., Grange, R., Timofeeva, M. and Makarov, S.V. “Gallium Phosphide Nanowires in a Free-Standing, Flexible, and Semitransparent Membrane for Large-Scale Infrared-to-Visible Light Conversion” **ACS nano** 14(8), pp.10624-10632 (2020)<https://doi.org/10.1021/acsnano.0c04872> [IF= **15.881**]
10. Trofimov P, Pushkarev AP, Sinev IS, Fedorov VV, Bruyère S, Bolshakov A, Mukhin IS, Makarov SV. “Perovskite-Gallium Phosphide Platform for Reconfigurable Visible-Light Nanophotonic Chip” **ACS nano** (2020) [IF= **15.881**]<https://pubs.acs.org/doi/abs/10.1021/acsnano.0c01104>
11. Tiguntseva E, Koshelev K, Furasova A, Tonkaev P, Mikhailovskii V, Ushakova EV, Baranov DG, Shegai T, Zakhidov AA, Kivshar Y, Makarov SV. “Room-Temperature Lasing from Mie-Resonant Non-Plasmonic Nanoparticles” **ACS Nano**. (2020)<https://doi.org/10.1021/acsnano.0c01468> [IF= **15.881**]
12. Yubin Fan, Pavel Tonkaev, Yuhan Wang, Qinghai Song, Jiecai Han, Sergey Makarov, Yuri Kivshar, Shumin Xiao “Enhanced Multiphoton Processes in Perovskite Metasurfaces” **Nano Letters** , 2021 [DOI: 10.1021/acs.nanolett.1c02074 ] [ IF = **11.189** ]
13. Aditya Tripathi, Ha-Reem Kim, Pavel Tonkaev, Soon-Jae Lee, Sergey Makarov, Sergey S. Kruk, Mikhail Rybin, Hong-Gyu Park, Yuri Kivshar “Lasing Action from Anapole Metasurfaces” **Nano Letters** 21, 6563 (2021) [DOI: 10.1021/acs.nanolett.1c01857 ][IF = **11.189**]
14. Zograf GP, Ryabov D, Rutckaia V, Voroshilov P, Tonkaev P, Permyakov DV, Kivshar Y, Makarov SV. “Stimulated Raman scattering from Mie-resonant subwavelength nanoparticles”. **Nano Letters**. (2020).<https://pubs.acs.org/doi/abs/10.1021/acs.nanolett.0c01646> [IF = **11.189**]
15. S. V. Makarov, S. I. Kudryashov, I. Mukhin, A. Mozharov, V. Milichko, A. Krasnok and P. A. Belov, «Tuning of magnetic optical response in a dielectric nanoparticle by ultrafast photoexcitation of dense electron-hole plasma», **Nano Letters** 15, 6187–6192 (2015).<http://dx.doi.org/10.1021/acs.nanolett.5b02534> [IF = **11.189**]
16. SV Makarov, MI Petrov, U Zywietz, V Milichko, D Zuev, N Lopanitsyna, et al. “Efficient Second-Harmonic Generation in Nanocrystalline Silicon Nanoparticles” **Nano Letters** 17(5), 3047-3053 (2017)<http://pubs.acs.org/doi/abs/10.1021/acs.nanolett.7b00392> [IF = **11.189**]
17. G.P. Zograf, M.I. Petrov, D.A. Zuev, P.A. Dmitriev, V.A. Milichko, S.V. Makarov, P.A. Belov “Resonant Nonplasmonic Nanoparticles for Efficient Temperature-Feedback Optical Heating” **Nano Letters** 17 (5), 2945-2952 (2017)<http://pubs.acs.org/doi/abs/10.1021/acs.nanolett.7b00183> [IF = **11.189**]
18. SV Makarov, IS Sinev, VA Milichko, et.al “Nanoscale generation of white light for ultrabroadband nanospectroscopy” **Nano Letters** 18 (1), 535-539 (2018). [IF = **11.189**] <https://pubs.acs.org/doi/abs/10.1021/acs.nanolett.7b04542>
19. E Tiguntseva, GP Zograf, FE Komissarenko, DA Zuev, AA Zakhidov, S.V.Makarov, Y.Kivshar “Light-Emitting Halide Perovskite Nanoantennas” **Nano Letters** 18 (2), pp 1185–1190 (2018). <https://pubs.acs.org/doi/10.1021/acs.nanolett.7b04727>[IF = **11.189**]
20. EY Tiguntseva, DG Baranov, AP Pushkarev, B Munkhbat, F Komissarenko, M. Franckevicius, A.A Zakhidov, T. Shegai, Yu.S Kivshar, S.V. Makarov “Tunable Hybrid Fano Resonances in Halide Perovskite Nanoparticles” **Nano Letters** 18 (9), 5522-5529 (2018).<https://pubs.acs.org/doi/abs/10.1021/acs.nanolett.8b01912> [IF = **11.189**]
21. A.Y. Zhizhchenko, P. Tonkaev, D. Gets, A. Larin, D. Zuev, S. Starikov, E.V. Pustovalov, A.M. Zakharenko, S.A. Kulinich, S. Juodkazis, A.A.Kuchmizhak, and S.V. Makarov “Light-emitting nanophotonic designs enabled by ultrafast laser processing of halide perovskites” **Small** 2000410 (2020) [IF=**13.281**]<https://doi.org/10.1002/smll.202000410>
22. S.V. Makarov, A.S. Zalogina, M. Tajik, D.A. Zuev, M.V. Rybin, A.A. Kuchmizhak, S. Juodkazis, and Y. Kivshar “Light-Induced Tuning and Reconfiguration of Nanophotonic Structures” **Laser & Photonics Reviews** 11(5), 1700108(2017) [IF= **13.138**] (***In top-20 most downloaded papers of the journal in 01/2017-12/2018***). [<https://onlinelibrary.wiley.com/doi/full/10.1002/lpor.201700108>]
23. S. V. Makarov, V. A. Milichko, I. S. Mukhin, et al. "Controllable Femtosecond Laser-Induced Dewetting for Plasmonic Applications" **Laser & Photonics Reviews** 10(1), 91-99 (2016)<http://onlinelibrary.wiley.com/doi/10.1002/lpor.201500119/full> [IF= **13.138**]
24. D. G. Baranov, S. V. Makarov, A. E. Krasnok, P. A. Belov, and A. Alù, “Tuning of near‐and far‐field properties of all‐dielectric dimer nanoantennas via ultrafast electron‐hole plasma photoexcitation” **Laser & Photonics Reviews**, 10(6), 1009-1015 (2016).<http://onlinelibrary.wiley.com/doi/10.1002/lpor.201600164/full> [IF= **13.138**]
25. A. Y. Zhizhchenko, Artem Cherepakhin, Mikhail Masharin, Anatoly Pushkarev, S. A. Kulinich, A. P. Porfirev, A. A. Kuchmizhak, Sergey Makarov “Direct Imprinting of Laser Field on Halide Perovskite Single Crystal for Advanced Photonic Applications” **Laser & Photonics Reviews** , pp. 2100094 (2021) [DOI: 10.1002/lpor.202100094 ] [IF = **13.138**]
26. I.S. Sinev, A.A. Bogdanov, F.E. Komissarenko, K.S. Frizyuk, M.I. Petrov, I.S. Mukhin, S.V. Makarov, A.K. Samusev, A.V. Lavrinenko, and I.V. Iorsh “Chirality driven by magnetic dipole response for demultiplexing of surface waves” **Laser & Photonics Reviews,** 11(5) 1700168(2017)<http://onlinelibrary.wiley.com/doi/10.1002/lpor.201700168/full> [IF= **13.138**]
27. VA Milichko, DA Zuev, DG Baranov, GP Zograf, K Volodina, AA Krasilin , S.V. Makarov, P.A. Belov, “Metal‐Dielectric Nanocavity for Real‐Time Tracing Molecular Events with Temperature Feedback” **Laser & Photonics Reviews**, 12(1), 1700227 (2018)<https://onlinelibrary.wiley.com/doi/full/10.1002/lpor.201700227> [IF= **13.138**]
28. Sun Y., Sinev I., Zalogina A., Ageev E., Shamkhi H., Komissarenko F., Morozov I., Lepeshov S., Milichko V., Makarov S. and Mukhin I., “Reconfigurable Near‐field Enhancement with Hybrid Metal‐Dielectric Oligomers” **Laser & Photonics Reviews**, p.1800274 (2019)<https://onlinelibrary.wiley.com/doi/abs/10.1002/lpor.201800274> [IF= **13.138**]
29. Zograf G.P., Timin A.S., Muslimov A.R. Shishkin, I.I. Nominé A., Ghanbaja J., Ghosh P., Li Q., Zyuzin M.V. and Makarov S.V. “All‐Optical Nanoscale Heating and Thermometry with Resonant Dielectric Nanoparticles for Controllable Drug Release in Living Cells”. **Laser & Photonics Reviews**, 1900082 (2020).<https://onlinelibrary.wiley.com/doi/full/10.1002/lpor.201900082> [IF= **13.138**]
30. S Makarov, A Furasova, E Tiguntseva, A Hemmetter, A Berestennikov, et al. “Halide‐Perovskite Resonant Nanophotonics” **Advanced Optical Materials**, 1800784 (2018)<https://onlinelibrary.wiley.com/doi/full/10.1002/adom.201800784> [IF= **9.926**] ***(‘Hall of Fame’ Article, Top 10% downloaded in 2018-2019*)**
31. X Wang, A Kuchmizhak, D Storozhenko, SV Makarov, S Juodkazis “Single-step laser plasmonic coloration of metal films” **ACS Appl. Mater. Interfaces**, 10(1), 1422-1427 (2018)<https://pubs.acs.org/doi/abs/10.1021/acsami.7b16339> [IF= **8.5**]
32. Pushkarev A., Korolev V., Markina D., Komissarenko F., Naujokaitis A., Drabavičius A., Pakštas V., Franckevičius M., Khubezhov S., Sannikov D., Zasedatelev A., P. Lagoudakis, A.A. Zakhidov, and S.V. Makarov “A Few-Minute Synthesis of CsPbBr3 Nanolasers with a High Quality Factor by Spraying at Ambient Conditions” **ACS Applied Materials & Interfaces** 11 (1), pp 1040–1048 (2019)<https://pubs.acs.org/doi/abs/10.1021/acsami.8b17396> [IF= **8.5**]
33. A Rudenko, K Ladutenko, S Makarov, TE Itina «Photogenerated Free Carrier‐Induced Symmetry Breaking in Spherical Silicon Nanoparticle» **Advanced Optical Materials** 6 (7), 1701153 (2018)<https://onlinelibrary.wiley.com/doi/abs/10.1002/adom.201701153> [IF= **7.43**]
34. A Furasova, E Calabró, E Lamanna, E. Tiguntseva, Ushakova E., Ubyivovk E., Mikhailovskii V., Zakhidov A., Makarov S., A and Di Carlo “Resonant Silicon Nanoparticles for Enhanced Light Harvesting in Halide Perovskite Solar Cells” **Advanced Optical Materials** 6 (21), 1800576 (2018)<https://onlinelibrary.wiley.com/doi/full/10.1002/adom.201800576> [IF= **7.43**]
35. S. Chang, E.V. Ushakova, A.P. Litvin, S.A. Cherevkov, A.V. Sokolova, D. Gets, A. Berestennikov, S.V. Makarov, T. Chen, A.L. Rogach, and Hai-Zheng Zhong “Tunable Mie Resonances of Tin-Based Iodide Perovskite Island-Like Films with Enhanced Infrared Photoluminescence” **The Journal of Physical Chemistry Letters** 11, 3332-3338 (2020)<https://doi.org/10.1021/acs.jpclett.0c00745> [IF=**7.3**]
36. E.Mitsai, M.Aouassa, L.Hassayoun, D.Storozhenko, Mironenko, S.Bratskaya, S. Juodkazis, S.Makarov, A.Kuchmizhak “SiGe nanoantennas with tailored Raman response and light-to-heat conversion for advanced sensing applications” **Nanoscale**, (2019) [IF= **7**]
37. S. V. Makarov, A. N. Tsypkin, T. A. Voytova, V. A. Milichko, I. S. Mukhin, A. V. Yulin, and P.A. Belov, “Self-adjusted all-dielectric metasurfaces for deep ultraviolet femtosecond pulse generation”. **Nanoscale**, 8(41), 17809-17814 (2016).<http://pubs.rsc.org/en/content/articlelanding/2016/nr/c6nr04860a#!divAbstract> [IF= **7**].
38. P.A. Dmitriev, D.G. Baranov, V.A. Milichko, S.V. Makarov, et al. «Resonant Raman scattering from silicon nanoparticles enhanced by magnetic response» **Nanoscale**, 8(18), 9721-9726 (2016).<http://pubs.rsc.org/en/content/articlelanding/2016/nr/c5nr07965a> [IF= **7**].
39. P. A. Dmitriev, S. V. Makarov, V. A. Milichko, et al. "Laser fabrication of crystalline silicon nanoresonators from an amorphous film for low-loss all-dielectric nanophotonics" **Nanoscale** 8, 5043-5048 (2016)<http://pubs.rsc.org/en/content/articlelanding/2015/nr/c5nr06742a> [IF= **7**].
40. A. Kuchmizhak, O. Vitrik, Yu. Kulchin,D. Storozhenko, A. Mayor, A. Mirochnik, S. Makarov, et al. «Laser printing of resonant plasmonic nanovoids» **Nanoscale** 8, 12352-12361 (2016)<http://pubs.rsc.org/en/content/articlelanding/2016/nr/c6nr01317a/> [IF= **7**].
41. E. Tiguntseva, A. Chebykin, A. Ishteev, R. Haroldson, B. Balachandran, E. Ushakova, F. Komissarenko, H. Wang, V. Milichko, A. Tsypkin, D. Zuev, W. Hu, S. Makarov and A. Zakhidov “Resonant silicon nanoparticles for enhancement of light absorption and photoluminescence from hybrid perovskite films and metasurfaces” **Nanoscale** (2017)<http://pubs.rsc.org/en/content/articlehtml/2017/nr/c7nr01631j> [IF= **7**].
42. S Makarov, L Kolotova, S Starikov, U Zywietz, B Chichkov «Resonant Silicon Nanoparticles with Controllable Crystalline State and Nonlinear Optical Response» **Nanoscale** 10, 11403-11409 (2018)<https://pubs.rsc.org/en/content/articlehtml/2018/nr/c8nr02057d> [IF= **7**].
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