

# Roman Dubrovin, PhD

## 1. Personal data

Roman Mikhailovich Dubrovin, PhD, born on 26.06.1991

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Science ID: 20191-114026

CoLab [R-35D66-0F270-NX76G](#)

SPIN ПИИЦ: 3701-5067



Current position: Senior Research Fellow  
Ferroics Physics Laboratory  
Ioffe Institute, St. Petersburg, Russia

## 2. Education

- 07.2014 – 07.2018 Researcher,  
Ioffe Institute, Russian Academy of Sciences  
Ferroics Physics Laboratory and Laboratory for Optical  
Phenomena in Ferroelectric and Magnetic Crystals
- 09.2012 – 06.2014 Master of Engineering and Technology (cum laude),  
St. Petersburg State Polytechnical University,  
Institute of Physics, Nanotechnology and Telecommunications,  
Department of Semiconductor Physics and Nanoelectronics
- 09.2008 – 06.2012 Bachelor of Engineering and Technology (cum laude),  
St. Petersburg State Polytechnical University,  
Radiophysical Faculty,  
Department of Semiconductor Physics and Nanoelectronics

## 3. Academic Degree

- Promotion [PhD in Physical and Mathematical Sciences](#), 20.05.2021,  
Ioffe Institute, Russian Academy of Sciences,  
St. Petersburg, Russia  
[“Lattice dynamics and spontaneous magnetodielectric  
effects in fluoroperovskites”](#)  
Promoter: Prof. Roman Pisarev

#### 4. Work Experience

- Since 11.2022 Senior Research Fellow,  
Ferroics Physics Laboratory (Head Dr. A.M. Kalashnikova),  
Ioffe Institute, Russian Academy of Sciences
- 07.2021 – 10.2022 Research Fellow,  
Ferroics Physics Laboratory (Head Dr. A.M. Kalashnikova),  
Ioffe Institute, Russian Academy of Sciences
- 04.2016 – 07.2021 Junior Research Fellow (PhD Student)  
Ferroics Physics Laboratory (Head Prof. A.K. Tagantsev),  
Ioffe Institute, Russian Academy of Sciences
- 07.2014 – 04.2016 Senior Laboratory Assistant (PhD Student)  
Ferroics Physics Laboratory (Head Prof. A.K. Tagantsev),  
Ioffe Institute, Russian Academy of Sciences

#### 5. Scientific Interests

Condensed matter physics, Lattice dynamics, Nonlinear phononics,  
Fluoroperovskites, Far-infrared spectroscopy, Dielectric spectroscopy

#### 6. Skills

MATLAB, Maple, Python, LabVIEW, Origin, LaTeX

#### 7. Selected Publications

T.W.J. Metzger, K.A. Grishunin, D. Afanasiev, R.M. Dubrovin,  
E.A. Mashkovich, R.V. Pisarev, A.V. Kimel, Effect of antiferromagnetic  
order on a propagating single-cycle THz pulse, [Appl. Phys. Lett. 121, 252403 \(2022\)](#)

F. Formisano, R.M. Dubrovin, R.V. Pisarev, A.K. Zvezdin,  
A.M. Kalashnikova, A.V. Kimel, Laser-induced THz piezomagnetism and  
lattice dynamics of antiferromagnets  $\text{MnF}_2$  and  $\text{CoF}_2$ , [Ann. Phys. 447, 169041 \(2022\)](#)

F. Formisano, R.M. Dubrovin, R.V. Pisarev, A.M. Kalashnikova, A.V. Kimel,  
Laser-induced THz magnetism of antiferromagnetic  $\text{CoF}_2$ , [J. Phys.: Condens. Matter. 34, 225801 \(2022\)](#)

E.A. Mashkovich, K.A. Grishunin, R.M. Dubrovin, A.K. Zvezdin,  
R.V. Pisarev, A.V. Kimel, Terahertz light-driven coupling of  
antiferromagnetic spins to lattice, [Science 374, 1608 \(2021\)](#)

R.M. Dubrovin, A.C. Garcia-Castro, N.V. Siverin, N.N. Novikova,  
K.N. Boldyrev, Aldo H. Romero, and R.V. Pisarev, Incipient geometric  
lattice instability of cubic fluoroperovskites, [Phys. Rev. B 104, 144304 \(2021\)](#)

R.M. Dubrovin, N.V. Siverin, M.A. Prosnikov, V.A. Chernyshev,  
N.N. Novikova, P.C.M. Christianen, A.M. Balbashov, and R.V. Pisarev,

Lattice dynamics and spontaneous magnetodielectric effect in ilmenite  $\text{CoTiO}_3$ , [J. Alloys Compd. \*\*858\*\*, 157633 \(2020\)](#)

[R.M. Dubrovin](#), L.N. Alyabyeva, N.V. Siverin, B.P. Gorshunov, N.N. Novikova, K.N. Boldyrev, and R.V. Pisarev, Incipient multiferroicity in Pnma fluoroperovskite  $\text{NaMnF}_3$ , [Phys. Rev. B \*\*101\*\*, 180403\(R\) \(2020\)](#)

[R.M. Dubrovin](#) and R. V. Pisarev, Spontaneous Magnetodielectric Effect and Its Coupling to the Lattice Dynamics in Fluoroperovskites, [J. Exp. Theor. Phys. \*\*131\*\*, 189 \(2020\)](#)

[R.M. Dubrovin](#), N.V. Siverin, P.P. Syrnikov, N.N. Novikova, K.N. Boldyrev, and R.V. Pisarev, Lattice dynamics and microscopic mechanisms of the spontaneous magnetodielectric effect in the antiferromagnetic fluoroperovskites  $\text{KCoF}_3$  and  $\text{RbCoF}_3$ , [Phys. Rev. B \*\*100\*\*, 024429 \(2019\)](#)

[R.M. Dubrovin](#), S.A. Kizhaev, P.P. Syrnikov, J.-Y. Gesland, and R.V. Pisarev, Unveiling hidden structural instabilities and magnetodielectric effect in manganese fluoroperovskites  $\text{AMnF}_3$ , [Phys. Rev. B \*\*98\*\*, 060403\(R\) \(2018\)](#)

## **8. Awards**

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|------|---|
| 2014 | Medal of SPbSTU for significant achievements in educational, scientific and social activities |
| 2014 | The Best Graduate of 2014 of the St. Petersburg Universities                                  |
| 2008 | Diploma of Third Degree, Physics, MIPT Olympics "Fizteh - 2008"                               |