# Sergey A Medvedev

List of Publications by Year
in descending order



| 66 | 3,697 | 331538 | 128225 |
|---|---|---|---|
| papers | citations | 21 h-index | 60 g-index |

| 71 | 71 | 71 | 5122 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Electronic and magnetic phase diagram of Î²-Fe1.01Se with superconductivity at 36.7â€‰K underÂpressure. Nature Materials, 2009, 8, 630-633. | 13.3 | 943 |
| 2 | Transparent dense sodium. Nature, 2009, 458, 182-185. | 13.7 | 710 |
| 3 | Superconductivity in Weyl semimetal candidate MoTe2. Nature Communications, 2016, 7, 11038. | 5.8 | 611 |
| 4 | Superconductivity in Hydrogen Dominant Materials: Silane. Science, 2008, 319, 1506-1509. | 6.0 | 340 |
| 5 | Phase separation in superconducting and antiferromagnetic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi>Rb</mml:mi><mml:mrow><mml:mn>0.8</mml:mn></mml:mrow></mml:msub> by MÃ¶ssbauer spectroscopy. Physical Review B, 2011, 84, . | 1.1 | 98 |
| 6 | Ammonia as a case study for the spontaneous ionization of a simple hydrogen-bonded compound. Nature Communications, 2014, 5, 3460. | 5.8 | 70 |
| 7 | Molecular Structure of Hydrazoic Acid with Hydrogen-Bonded Tetramers in Nearly Planar Layers. Journal of the American Chemical Society, 2011, 133, 12100-12105. | 6.6 | 69 |
| 8 | Pressure-induced superconductivity up to 13.1 K in the pyrite phase of palladium diselenide <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>PdS</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2017, 96, . | 1.1 | 66 |
| 9 | Phase stability of lithium azide at pressures up to 60 GPa. Journal of Physics Condensed Matter, 2009, 21, 195404. | 0.7 | 58 |
| 10 | Topological Quantum Phase Transition and Superconductivity Induced by Pressure in the Bismuth Tellurohalide BiTeI. Advanced Materials, 2017, 29, 1605965. | 11.1 | 51 |
| 11 | Pressure-driven superconductivity in the transition-metal pentatelluride<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>HfT</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>5</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2016, 94, . | 1.1 | 46 |
| 12 | Pressure induced polymorphism in ammonium azide (NH4N3). Chemical Physics, 2011, 386, 41-44. | 0.9 | 37 |
| 13 | Density of phonon states in superconducting FeSe as a function of temperature and pressure. Physical Review B, 2010, 81, . | 1.1 | 34 |
| 14 | Large resistivity change and phase transition in the antiferromagnetic semiconductors LiMnAs and LaOMnAs. Physical Review B, 2013, 88, . | 1.1 | 34 |
| 15 | Large nonsaturating magnetoresistance and pressure-induced phase transition in the layered semimetal <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>HfTe</mml:mi><mml:mn>2</mml:mn></mml:msub> Physical Review B, 2017, 96, . | 1.1 | 34 |
| 16 | Pressure-induced superconductivity and topological quantum phase transitions in a quasi-one-dimensional topological insulator: Bi4I4. Npj Quantum Materials, 2018, 3, . | 1.8 | 34 |
| 17 | Superconductivity and magnetism in Rb0.8Fe1.6Se2under pressure. Physical Review B, 2012, 85, . | 1.1 | 27 |
| 18 | Pressure-induced metallization, transition to the pyrite-type structure, and superconductivity in palladium disulfide <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Pd</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2019, 100, . | 1.1 | 25 |

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|---|---|---|---|
| 19 | Pressure-induced structural phase transition in the half-Heusler compound CaAuBi. Solid State Sciences, 2014, 30, 6-10. | 1.5 | 24 |
| 20 | Coexistence of Superconductivity and Charge Density Waves in Tantalum Disulfide: Experiment and Theory. Physical Review Letters, 2020, 125, 186401. | 2.9 | 24 |
| 21 | Exotic magnetism in the alkali sesquioxidesRb4O6andCs4O6. Physical Review B, 2009, 79, . | 1.1 | 22 |
| 22 | Pressure-restored superconductivity in Cu-substituted FeSe. Physical Review B, 2011, 84, . | 1.1 | 19 |
| 23 | Pressure-tuned vibrational resonance coupling of intramolecular fundamentals in ammonium azide (NH4N3). Vibrational Spectroscopy, 2012, 58, 188-192. | 1.2 | 17 |
| 24 | A Roomâ€Temperature Verweyâ€type Transition in Iron Oxide, Fe<sub>5</sub>O<sub>6</sub>. Angewandte Chemie - International Edition, 2020, 59, 5632-5636. | 7.2 | 17 |
| 25 | Transformation from molecular to polymeric nitrogen at high pressures and temperatures: In situ x-ray diffraction study. Applied Physics Letters, 2008, 93, . | 1.5 | 16 |
| 26 | Effect of pressure on superconductivity in NaAlSi. Physical Review B, 2012, 86, . | 1.1 | 16 |
| 27 | Low-temperature phases of solid oxygen at pressures up to8GPadetermined by Raman and infrared spectroscopy. Physical Review B, 2005, 72, . | 1.1 | 15 |
| 28 | Nature of infrared-active phonon sidebands to internal vibrations: Spectroscopic studies of solid oxygen and nitrogen. Physical Review B, 2002, 66, . | 1.1 | 13 |
| 29 | Pressure-induced transition to the collapsed tetragonal phase in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>BaC</mml:mi><mml:msub><mml:mi mathvariant="normal">r</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">A</mml:mi><mml:msub><mml:mi mathvariant="normal">s</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2017, 95, . | 1.1 | 13 |
| 30 | Pressure-induced metallization in layered ReSe<sub>2</sub>. Journal of Physics Condensed Matter, 2018, 30, 035401. | 0.7 | 12 |
| 31 | Suppression of axionic charge density wave and onset of superconductivity in the chiral Weyl semimetal <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Ta</mml:mi><mml:mn>2</mml:mn></mml:mrow></mml:math> mathvariant="normal">I</mml:mi></mml:mrow></mml:math>. Physical Review Materials, 2021, 5, . | 0.9 | 12 |
| 32 | Exotic magnetic and electronic properties of layered <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>CrI</mml:mi><mml:mn>3</mml:mn></mml:msub></mml: single crystals under high pressure. Physical Review B, 2022, 105, . | 1.1 | 12 |
| 33 | Synthesis of High-Nitrogen Energetic Material. , 2009, , 75-97. | | 11 |
| 34 | Fourier transform infrared spectroscopy of electronic excitations to probe magnetic order and phase transitions in solid oxygen. Physical Review B, 2001, 63, . | 1.1 | 10 |
| 35 | Intercalation effect on hyperfine parameters of Fe in FeSe superconductor with T <sub>c</sub> = 42â€šK. Europhysics Letters, 2015, 109, 67004. | 0.7 | 10 |
| 36 | Phase transitions of cesium azide at pressures up to 30â€‰GPa studied using in situ Raman spectroscopy. Journal of Applied Physics, 2015, 117, 165901. | 1.1 | 10 |

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| 37 | Atomic and electronic structures evolution of the narrow band gap semiconductor Ag<sub>2</sub>Se under high pressure. Journal of Physics Condensed Matter, 2016, 28, 385801. | 0.7 | 9 |
| 38 | Phase Separation in RbxFe2â^'ySe2 Probed by Non-stoichiometry and Cu Doping. Journal of Superconductivity and Novel Magnetism, 2015, 28, 1315-1319. | 0.8 | 8 |
| 39 | Suppression of the ferromagnetic order in the Heusler alloy Ni50Mn35In15 by hydrostatic pressure. Applied Physics Letters, 2016, 108, 261903. | 1.5 | 8 |
| 40 | Pressure-induced Lifshitz and structural transitions in NbAs and TaAs: experiments and theory. Journal of Physics Condensed Matter, 2018, 30, 185401. | 0.7 | 8 |
| 41 | High-pressure magnetism of the double perovskite <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Sr</mml:mi><mml:mn>2</mml:mn></mml studied by synchrotron <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">Fe</mml:mi><mml:mprescripts /><mml:none /><mml:mn>57</mml:mn></mml:mmultiscripts></mml:math> Mössbauer spectroscopy. Physical Review B | 1.1 | 8 |
| 42 | Pressure-induced superconductivity and modification of Fermi surface in type-II Weyl semimetal NbIrTe4. Npj Quantum Materials, 2021, 6, . | 1.8 | 8 |
| 43 | <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Mn</mml:mi><mml:mrow><mml:mn>1</mml mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> : Magnetic and magnetotransport properties at ambient pressure and ferro- to antiferromagnetic transition under pressure. Physical Review B, 2020, 102, . | 1.1 | 8 |
| 44 | Pressure effect on superconductivity in FeSe<sub>0.5</sub>Te<sub>0.5</sub>. Physica Status Solidi (B): Basic Research, 2017, 254, 1600161. | 0.7 | 7 |
| 45 | Structure and electrical resistivity of mixed-valent EuNi2P2at high pressure. Journal of Physics Condensed Matter, 2014, 26, 335701. | 0.7 | 6 |
| 46 | More Than 50 Years after Its Discovery in SiO2 Octahedral Coordination Has Also Been Established in SiS2 at High Pressure. Inorganic Chemistry, 2017, 56, 372-377. | 1.9 | 6 |
| 47 | Interplay Between Superconductivity and Magnetism in Cu-Doped FeSe Under Pressure. Journal of Superconductivity and Novel Magnetism, 2018, 31, 763-769. | 0.8 | 6 |
| 48 | Orientational order in the molecular solidsN2, CO, andO2investigated via combined excitations with FTIR. Physical Review B, 2007, 75, . | 1.1 | 5 |
| 49 | Pressure-induced magnetic collapse and metallization of TlFe1.6Se2. Physical Review B, 2017, 96, . | 1.1 | 5 |
| 50 | Pressure-induced Lifshitz transition in NbP: Raman, x-ray diffraction, electrical transport, and density functional theory. Physical Review B, 2018, 97, . | 1.1 | 5 |
| 51 | Anisotropic superconductivity and quantum oscillations in the layered dichalcogenide <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>TaSnS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml Physical Review B, 2020, 102, . | 1.1 | 5 |
| 52 | Spiral magnetism, spin flop, and pressure-induced ferromagnetism in the negative charge-transfer-gap insulator <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Sr</mml:mi><mml:mn>2</mml:mn></mml Physical Review B, 2022, 105, . | 1.1 | 5 |
| 53 | FTIR Study of Electronic Transitions in Solid Oxygen at High Pressure and Low Temperature. Journal of Low Temperature Physics, 2001, 122, 323-330. | 0.6 | 4 |
| 54 | Pressure Effect on the Optical Bandshape of Solid Oxygen. Journal of Physical Chemistry B, 2003, 107, 4768-4776. | 1.2 | 4 |

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|---|---|---|---|
| 55 | Pressure-induced transition to Ni2In-type phase in lithium sulfide (Li2S). Solid State Sciences, 2016, 61, 220-224. | 1.5 | 4 |
| 56 | Correlation Between T c and Hyperfine Parameters of Fe in Layered Chalcogenide Superconductors. Journal of Superconductivity and Novel Magnetism, 2016, 29, 573-576. | 0.8 | 4 |
| 57 | Large resistivity reduction in mixed-valent <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>CsAuBr</mml:mi><mml:mn>3</mml:mn></mml:msub> under pressure. Physical Review B, 2019, 100, . | 1.1 | 4 |
| 58 | Study of magnon mode characteristics in solid oxygen by high resolution spectroscopy. Journal of Physics Condensed Matter, 2003, 15, 7375-7384. | 0.7 | 3 |
| 59 | Structural transitions under high-pressure in a langasite-type multiferroic Ba3TaFe3Si2O14. Solid State Sciences, 2015, 49, 37-42. | 1.5 | 2 |
| 60 | Pressure-Induced Semiconductor-Semimetal Transition in Rb0.8Fe1.6S2. JETP Letters, 2019, 109, 536-540. | 0.4 | 2 |
| 61 | A Roomâ€Temperature Verweyâ€type Transition in Iron Oxide, Fe 5 O 6. Angewandte Chemie, 2020, 132, 5681-5685. | 1.6 | 2 |
| 62 | Tuning of the Electronic and Vibrational Properties of Transition Metal Selenides TSe2 (T = Os, Ru) and Their Metallization at High Pressures. JETP Letters, 2020, 111, 456-462. | 0.4 | 1 |
| 63 | Amorphousâ€“crystalline films of fullerite C60. Low Temperature Physics, 1999, 25, 79-80. | 0.2 | 0 |
| 64 | Innentitelbild: A Roomâ€Temperature Verweyâ€type Transition in Iron Oxide, Fe<sub>5</sub>O<sub>6</sub> (Angew. Chem. 14/2020). Angewandte Chemie, 2020, 132, 5450-5450. | 1.6 | 0 |
| 65 | Pressure-induced collapse of large-moment magnetic order and localized-to-itinerant electronic transition in the host-guest compound <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mrow><mml:mo>[</mml:mo><mml:mrow><mml:mi mathvariant="normal">C</mml:mi><mml:msub><mml:mi mathvariant="normal">s</mml:mi><mml:mn>6</mml:mn></mml:msub><mml:mi>Cl</mml:mi></mml:mrow><mml:mo>]</mml:mo> mathvariant="normal">F</mml:mi><mml:msub><mml:mi ma. Physical Review B, 2020, 101, . | 1.1 | 0 |
| 66 | Solid oxygen as low dimensional system by spectroscopic studies. , 2001, , 217-234. | | 0 |