

Sergey Eremeev

List of Publications by Year in descending order

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196
papers

5,744
citations

87723

38
h-index

88477

70
g-index

199
all docs

199
docs citations

199
times ranked

4398
citing authors

#	ARTICLE	IF	CITATIONS
19	Nature of the Dirac gap modulation and surface magnetic interaction in axion antiferromagnetic topological insulator MnBi_2Te_4 . Scientific Reports, 2020, 10, 13226.	1.6	62
20	Quasiparticle interference on the surface of Bi_2Se_3 induced by cobalt adatom in the absence of ferromagnetic ordering. Physical Review B, 2012, 85, .	1.1	61
21	Spin texture of Bi_2Te_3 films in the Quantum Tunneling Limit. Physical Review Letters, 2014, 112, 057601.	1.92	111
22	Unoccupied topological states on bismuth chalcogenides. Physical Review B, 2012, 86, .	1.1	60
23	Bulk and surface Rashba splitting in single termination BiTeCl . New Journal of Physics, 2013, 15, 085022.	1.2	60
24	Magnetic proximity effect in the three-dimensional topological insulator/ferromagnetic insulator heterostructure. Physical Review B, 2013, 88, .	1.1	60
25	Ab initio electronic structure of thallium-based topological insulators. Physical Review B, 2011, 83, .	1.1	59
26	Competing rhombohedral and monoclinic crystal structures in MnPn_2 compounds: An ab-initio study. Journal of Alloys and Compounds, 2017, 709, 172-178.	2.8	58
27	Inertness and degradation of (0001) surface of Bi_2Se_3 topological insulator. Journal of Applied Physics, 2012, 112, .	1.1	57
28	Electrically Tunable In-Plane Anisotropic Magnetoresistance in Topological Insulator BiSbTeSe_2 Nanodevices. Nano Letters, 2015, 15, 2061-2066.	4.5	56
29	Bulk and surface electron dynamics in a SnSb_2Te_4 topological insulator. Physical Review B, 2014, 89, .	1.1	54
30	Large spin splitting of metallic surface-state bands at adsorbate-modified gold/silicon surfaces. Scientific Reports, 2013, 3, 1826.	1.6	51
31	Rashba split surface states in BiTeBr . New Journal of Physics, 2013, 15, 075015.	1.2	51
32	New Universal Type of Interface in the Magnetic Insulator/Topological Insulator Heterostructures. Nano Letters, 2018, 18, 6521-6529.	4.5	51
33	Fabrication of a novel magnetic topological heterostructure and temperature evolution of its massive Dirac cone. Nature Communications, 2020, 11, 4821.	5.8	47
34	Vibrations in submonolayer structures of Na on $\text{Cu}(111)$. Physical Review B, 2006, 74, .	1.1	46
35	Ternary thallium-based semimetal chalcogenides TI-VI_2 as a new class of three-dimensional topological insulators. JETP Letters, 2010, 91, 594-598.	0.4	42
36	Ternary compounds based on binary topological insulators as an efficient way for modifying the Dirac cone. JETP Letters, 2011, 93, 15-20.	0.4	42

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37	Giant Rashba-type spin splitting at polar surfaces of BiTeI. JETP Letters, 2012, 96, 437-444.	0.4	41
38	Experimental Evidence of Hidden Topological Surface States in PbBi_4Te_3 . Physical Review Letters, 2013, 111, 206803.	2.9	39
39	Electronic structure and magnetic properties of Co- and Mn-based Heusler alloys and thin films. Solid State Communications, 2004, 130, 793-797.	0.9	38
40	Many-body effects on the Rashba-type spin splitting in bulk bismuth tellurohalides. Physical Review B, 2013, 87, .	1.1	38
41	Interface induced states at the boundary between a 3D topological insulator Bi ₂ Se ₃ and a ferromagnetic insulator EuS. Journal of Magnetism and Magnetic Materials, 2015, 383, 30-33.	1.0	38
42	On the origin of two-dimensional electron gas states at the surface of topological insulators. JETP Letters, 2011, 94, 106-111.	0.4	35
43	Electronic and spin structure of the topological insulator Bi ₂ Te ₃ . Physical Review B, 2011, 84, 041407.	1.1	35
44	Thermally induced defects and the lifetime of electronic surface states. Physical Review B, 2007, 75, .	1.1	33
45	Electronic structure of SnSb ₂ Te ₄ and PbSb ₂ Te ₄ topological insulators. Applied Surface Science, 2013, 267, 1-3.	3.1	33
46	Electron-phonon contribution to the phonon and excited electron (hole) linewidths in bulk Pd. Journal of Physics Condensed Matter, 2006, 18, 7923-7935.	0.7	31
47	Topological Magnetic Materials of the (MnSb ₂ Te ₄) _n (Sb ₂ Te ₃) _m van der Waals Compounds Family. Journal of Physical Chemistry Letters, 2021, 12, 4268-4277.	2.1	30
48	Multiple Coexisting Dirac Surface States in Three-Dimensional Topological Insulator PbBi ₆ Te ₁₀ . ACS Nano, 2016, 10, 3518-3524.	7.3	29
49	Band bending driven evolution of the bound electron states at the interface between a three-dimensional topological insulator and a three-dimensional normal insulator. Physical Review B, 2015, 91, .	1.1	28
50	Investigation of the electronic structure of Me/Al ₂ O ₃ (0001) interfaces. Physica B: Condensed Matter, 2009, 404, 2065-2071.	1.3	27
51	Electronic and spin structure of a family of Sn-based ternary topological insulators. Physical Review B, 2015, 92, .	1.1	27
52	New generation of two-dimensional spintronic systems realized by coupling of Rashba and Dirac fermions. Scientific Reports, 2015, 5, 12819.	1.6	27
53	Mirror-symmetry protected non-TRIM surface state in the weak topological insulator Bi ₂ TeI. Scientific Reports, 2016, 6, 20734.	1.6	27
54	Vibrations of small cobalt clusters on low-index surfaces of copper: Tight-binding simulations. Physical Review B, 2008, 78, .	1.1	26

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55	On possible deep subsurface states in topological insulators: The PbBi ₄ Te ₇ system. JETP Letters, 2010, 92, 161-165.	0.4	25
56	Electronic band structure of a TI/Sn atomic sandwich on Si(111). Physical Review B, 2015, 91, .	1.1	25
57	Electron-phonon coupling in a sodium monolayer on Cu(111). Surface Science, 2007, 601, 4553-4556.	0.8	24
58	Effect of oxygen vacancies on adhesion at the Nb/Al ₂ O ₃ and Ni/ZrO ₂ interfaces. Physics of the Solid State, 2008, 50, 543-552.	0.2	23
59	Defect and structural imperfection effects on the electronic properties of BiTe surfaces. New Journal of Physics, 2014, 16, 075013.	1.2	23
60	Two-Dimensional InSb Compound on Silicon as a Quantum Spin Hall Insulator. Nano Letters, 2018, 18, 4338-4345.	4.5	23
61	Ab initio study of 2DEG at the surface of topological insulator Bi ₂ Te ₃ . JETP Letters, 2012, 95, 213-218.	0.4	22
62	Ab-initio investigation of Ni(Fe)/ZrO ₂ (001) and NiFe/ZrO ₂ (001) interfaces. Surface Science, 2009, 603, 2218-2225.	0.8	21
63	Three- and two-dimensional topological insulators in Pb ₂ Sb ₂ Te ₅ , Pb ₂ Bi ₂ Te ₅ , and Pb ₂ Bi ₂ Se ₅ layered compounds. JETP Letters, 2011, 94, 217-221.	0.4	21
64	Termination-dependent surface properties in the giant-Rashba semiconductors BiTeX.	1.1	21
65	Synthesis of two-dimensional Tl _x Bi _{1-x} compounds and Archimedean encoding of their atomic structure. Scientific Reports, 2016, 6, 19446.	1.6	21
66	Natural sulfur-containing minerals as topological insulators with a wide band gap. JETP Letters, 2012, 96, 322-325.	0.4	20
67	Electron dynamics of unoccupied states in topological insulators. Journal of Electron Spectroscopy and Related Phenomena, 2014, 195, 258-262.	0.8	20
68	Electronic Structures and Surface Reconstructions in Magnetic Superconductor RbEuFe ₄ As ₄ . Journal of Physical Chemistry Letters, 2020, 11, 9393-9399.	2.1	20
69	Model pseudopotential for the (110) surface of fcc noble metals. Surface Science, 2010, 604, 804-810.	0.8	19
70	Quantum spin Hall insulators in centrosymmetric thin films composed from topologically trivial BiTe trilayers. Scientific Reports, 2017, 7, 43666.	1.6	19
71	Quantum Oscillations in Coupled Two-Dimensional Electron Systems. Physical Review Letters, 2009, 103, 026802.	2.9	18
72	Hydrogen adsorption on low-index surfaces of B2 titanium alloys. Physics of the Solid State, 2009, 51, 1281-1289.	0.2	18

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73	Temperature-driven topological quantum phase transitions in a phase-change material Ge ₂ Sb ₂ Te ₅ . Scientific Reports, 2016, 6, 38799.	1.6	18
74	Surface electronic structure of bismuth oxychalcogenides. Physical Review B, 2019, 100, .	1.1	18
75	Vibrations of alkali metal overlayers on metal surfaces. Journal of Physics Condensed Matter, 2008, 20, 224007.	0.7	17
76	Momentum-resolved electron dynamics of image-potential states on Cu and Ag surfaces. Physical Review B, 2012, 85, .	1.1	17
77	Electronic structure and coexistence of superconductivity with magnetism in $RbEu_{4}As_{4}$. Physical Review B, 2021, 103, .	1.1	17
78	Thallene: graphene-like honeycomb lattice of Tl atoms frozen on single-layer NiSi ₂ . 2D Materials, 2020, 7, 045026.	2.0	17
79	Surface phonons on Al(111) surface covered by alkali metals. Physical Review B, 2005, 71, .	1.1	16
80	Electronic structure and adhesion on metal-aluminum-oxide interfaces. Physics of the Solid State, 2010, 52, 2589-2595.	0.2	16
81	Efficient step-mediated intercalation of silver atoms deposited on the Bi ₂ Se ₃ surface. JETP Letters, 2013, 96, 714-718.	0.4	16
82	Inelastic electron-electron scattering for surface states on Cu(110) and Ag(110). Physical Review B, 2011, 84, .	1.1	15
83	Role of surface passivation in the formation of Dirac states at polar surfaces of topological crystalline insulators: The case of SnTe(111). Physical Review B, 2014, 89, .	1.1	15
84	Sublattice effect on topological surface states in complex $SnTe_{1-x}Mo_x$. Physical Review B, 2015, 91, .	1.1	15
85	Electronic and spin structure of the wide-band-gap topological insulator: Nearly stoichiometric Bi ₂ Te ₂ S. Physical Review B, 2018, 97, .	1.1	15
86	New topological surface state in layered topological insulators: Unoccupied dirac cone. JETP Letters, 2013, 96, 780-784.	0.4	14
87	Surface Dynamics of the Wetting Layers and Ultrathin Films on a Dynamic Substrate: (0.5±4) ML Pb/Cu(111). Journal of Physical Chemistry C, 2016, 120, 22304-22317.	1.5	14
88	Two- and three-dimensional topological phases in $BiTeX$ compounds. Physical Review B, 2017, 96, .	1.4	14
89	Vibrations on the (110) surface of FCC metals. Vacuum, 1995, 46, 625-628.	1.6	13
90	Bulk and surface electronic structure of SnBi ₄ Te ₇ topological insulator. Applied Surface Science, 2013, 267, 146-149.	3.1	13

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91	Direct measurement of the bulk spin structure of noncentrosymmetric BiTeCl. Physical Review B, 2015, 91, .	1.1	13
92	Electronic structure of low-index surfaces in TiNi and its change under oxide layer growth. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 438-440, 476-479.	2.6	12
93	Phonon-induced scattering of excited electrons and holes on (110) noble metal surfaces. Physical Review B, 2010, 82, .	1.1	12
94	Modelling near-surface bound electron states in a 3D topological insulator: analytical and numerical approaches. Journal of Physics Condensed Matter, 2014, 26, 485003.	0.7	12
95	Atomic structure and electronic properties of the two-dimensional Physical Review B, 2015, 92, .		
96	Spin-helical Dirac states in graphene induced by polar-substrate surfaces with giant spin-orbit interaction: a new platform for spintronics. Scientific Reports, 2014, 4, 6900.	1.6	12
97	Theory versus experiment for a family of single-layer compounds with a similar atomic arrangement: <mml:math		

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109	Electronic structure of low-index surfaces in austenitic and martensitic phases of TiNi and TiPd alloys. <i>Physica B: Condensed Matter</i> , 2004, 349, 342-347.	1.3	9
110	Cesium adsorption on the $\sqrt{2}$ -GaAs(001) surface. <i>Journal of Experimental and Theoretical Physics</i> , 2007, 104, 590-601.	0.2	9
111	Chlorine adsorption on the InAs (001) surface. <i>Semiconductors</i> , 2011, 45, 21-29.	0.2	9
112	Backward Reconstructions on GaAs(001) Surface Induced by Atomic Hydrogen Reactions: Surfactant-Assisted Low-Temperature Surface Ordering. <i>Journal of Physical Chemistry C</i> , 2013, 117, 9723-9733.	1.5	9
113	Spin-resolved band structure of heterojunction Bi-bilayer/3D topological insulator in the quantum dimension regime in annealed Bi ₂ Te _{2.4} Se _{0.6} . <i>Scientific Reports</i> , 2017, 7, 45797.	1.6	9
114	One-dimensional spin-polarized electron channel in the two-dimensional PbBi compound on silicon. <i>Physical Review B</i> , 2021, 104, .	1.1	9
115	Investigation of Heusler alloy-semiconductor interfaces. <i>Physics of the Solid State</i> , 2008, 50, 259-269.	0.2	8
116	Change in the electronic properties of an InAs (111)A surface at oxygen and fluorine adsorption. <i>Semiconductors</i> , 2012, 46, 49-55.	0.2	8
117	C60 capping of metallic 2D TI-Au compound with preservation of its basic properties at the buried interface. <i>Applied Surface Science</i> , 2020, 501, 144253.	3.1	8
118	Electronic structure and long-period states in Ag ₃ Mg: comparison with Cu-Au alloys. <i>Journal of Physics Condensed Matter</i> , 2000, 12, 8825-8830.	0.7	7
119	The electronic structure of grain boundaries in metals and alloys. <i>Computational Materials Science</i> , 2006, 36, 244-248.	1.4	7
120	Electron-phonon interaction in the quantum well state of the 1 ML Na/Cu(111) system. <i>Physics of the Solid State</i> , 2008, 50, 323-329.	0.2	7
121	Temperature dependence of the dynamics of the first image-potential state on Ag(111). <i>Physical Review B</i> , 2012, 86, .	1.1	7
122	Ferromagnetic HfO ₂ /Si/GaAs interface for spin-polarimetry applications. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	7
123	Comparison of urban areas based on database of topological relationships in geoinformational systems. <i>Pattern Recognition and Image Analysis</i> , 2015, 25, 314-320.	0.6	7
124	Submonolayer Adsorption of Potassium on Reconstructed and Unreconstructed Cu(110): Structure and Phonons. <i>Journal of Physical Chemistry C</i> , 2017, 121, 22969-22976.	1.5	7
125	Insight into the Temperature Evolution of Electronic Structure and Mechanism of Exchange Interaction in EuS. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 8328-8334.	2.1	7
126	Diffusion properties of Cu(001)-c(2 $\sqrt{2}$ -2) \times 2 Pd surface alloys. <i>Surface Science</i> , 2007, 601, 3640-3644.	0.8	6

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145	Theoretical study of the surface electronic structure and hydrogen adsorption properties in advanced hydrogen storage materials. <i>Computational Materials Science</i> , 2006, 36, 102-105.	1.4	4
146	Vibrations on Al surfaces covered by sodium. <i>Surface Science</i> , 2006, 600, 3921-3923.	0.8	4
147	Contribution of phonons to the line width of surface electronic states on Pd(111). <i>Physics of the Solid State</i> , 2011, 53, 2508-2514.	0.2	4
148	(Tl, Au)/Si(111) $\sqrt{7} \times \sqrt{7}$ 2D compound: an ordered array of identical Au clusters embedded in Tl matrix. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 025002.	0.7	4
149	Structural and electronic properties of C60 fullerene network self-assembled on metal-covered semiconductor surfaces. <i>Journal of Chemical Physics</i> , 2021, 154, 104703.	1.2	4
150	Vacancies at low-index surfaces of transition metals and aluminum. <i>Physics of the Solid State</i> , 1997, 39, 1230-1231.	0.2	3
151	On the nature of different temperature dependences of the size of antiphase domains in commensurate long-period structures. <i>Journal of Experimental and Theoretical Physics</i> , 2004, 98, 565-571.	0.2	3
152	Vibrational properties of the Pt(111)-p(2 $\sqrt{3}$ \times 2)-k surface superstructure. <i>Physics of the Solid State</i> , 2008, 50, 1570-1578.	0.2	3
153	New Ga-enriched reconstructions on the GaAs(001) surface. <i>JETP Letters</i> , 2009, 89, 185-190.	0.4	3
154	Vibrational properties of small cobalt clusters on the Cu(111) surface. <i>Physics of the Solid State</i> , 2009, 51, 1271-1280.	0.2	3
155	Vibrational states of the Pt(111)- $\sqrt{3} \times \sqrt{3}$ R30 $^\circ$ -k surface structure. <i>Russian Physics Journal</i> , 2010, 53, 396-403.	0.2	3
156	Method of calculating the electron-phonon scattering of surface electronic states on the (110) surface of noble metals. <i>Russian Physics Journal</i> , 2011, 54, 92-101.	0.2	3
157	2D Tl-Pb compounds on Ge(111) surface: atomic arrangement and electronic band structure. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 035001.	0.7	3
158	Algorithm for selecting homogeneous regions from a set of spatial objects. , 2017, , .		3
159	Topological states induced by local structural modification of the polar BiTeI(0001) surface. <i>New Journal of Physics</i> , 2018, 20, 063035.	1.2	3
160	Electronic properties of the two-dimensional (Tl, Rb)/Si(111) $\sqrt{3} \times \sqrt{3}$ compound having a honeycomb-like structure. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 415502.	0.7	3
161	Algorithms for Topological Analysis of Spatial Data. <i>Advances in Intelligent Systems and Computing</i> , 2020, , 81-92.	0.5	3
162	Electronic band structure of three-dimensional topological insulators with different stoichiometry composition. <i>Physical Review B</i> , 2020, 102, .	1.1	3

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163	Band gap opening in the BiSbTeSe topological surface state induced by ferromagnetic surface reordering. <i>Physical Review Materials</i> , 2021, 5, .	0.9	3
164	Divacancy binding energy at metal surfaces. <i>Russian Physics Journal</i> , 1997, 40, 579-583.	0.2	2
165	Diffusional and Vibrational Properties of $\text{Cu}(001)$ – Pd Surface Alloys. <i>Physics of the Solid State</i> , 2005, 47, 758.	0.2	2
166	Electronic structure and excitations on clean and nanostructured metal surfaces. <i>European Physical Journal B</i> , 2010, 75, 37-47.	0.6	2
167	Vibrations of tetrahedral Co and Cu clusters on a $\text{Cu}(111)$ surface. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 2596-2599.	0.8	2
168	Comparative study of vibrations in submonolayer structures of potassium on $\text{Pt}(111)$. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 104003.	0.7	2
169	Lifetimes of electronic excitations in unoccupied surface states and the image potential states on $\text{Pd}(110)$. <i>Journal of Experimental and Theoretical Physics</i> , 2012, 115, 673-680.	0.2	2
170	Method for calculating the contribution of inelastic electron-electron scattering lifetimes of electronic states on (110) noble metal surfaces. <i>Russian Physics Journal</i> , 2012, 54, 1196-1207.	0.2	2
171	Spatial objects classification algorithm on the basis of topological features of a form. , 2017, , .		2
172	Interplay of Topological States on TI/TCI Interfaces. <i>Materials</i> , 2020, 13, 4481.	1.3	2
173	Vibrational states of a cobalt dimer on the (111) and (001) copper surfaces. <i>Russian Physics Journal</i> , 2008, 51, 1327-1333.	0.2	1
174	Electronic structure and spin polarization at the $\text{NiMnSb}/\text{GaAs}(110)$ interface. <i>Journal of Experimental and Theoretical Physics</i> , 2009, 109, 339-344.	0.2	1
175	Theoretical study of hydrogen absorption near symmetric tilt grain boundaries in Pd and TiFe. <i>Technical Physics</i> , 2009, 54, 1204-1209.	0.2	1
176	Electronic structure of the NiMnSb -semiconductor (110) interface. <i>Physics of the Solid State</i> , 2010, 52, 105-111.	0.2	1
177	Theoretical investigations of the (110) interface between the full Heusler alloys and GaAs. <i>Russian Physics Journal</i> , 2010, 53, 225-230.	0.2	1
178	Structure and Properties of one- and Two-Dimensional Clusters of Groups IV–VI of Heavy $\tilde{\text{N}}$ -Elements. <i>Russian Physics Journal</i> , 2017, 60, 1218-1225.	0.2	1
179	First-principles calculations of mechanical characteristics of metal nitrides in Ti-Al-Ta-N system. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	1
180	Magnetic Properties of Trimers of Heavy p-Elements of Groups IV–VI. <i>JETP Letters</i> , 2019, 110, 211-216.	0.4	1

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181	Magnetic and vibrational properties of small chromium clusters on the Cu(111) surface. Physical Chemistry Chemical Physics, 2021, 23, 7814-7821.	1.3	1
182	An Algorithm for Constructing a Topological Skeleton for Semi-structured Spatial Data Based on Persistent Homology. Communications in Computer and Information Science, 2020, , 16-26.	0.4	1
183	10.1007/s11451-008-2008-x. , 2010, 50, 259.		1
184	MnBi ₂ Se ₄ -Based Magnetic Modulated Heterostructures. Magnetism, 2022, 2, 1-9.	0.6	1
185	Computer Simulated 3D Virtual Reality for Dynamical Modeling and Calculations of Carbon-Based Composite Materials. Materials Research Society Symposia Proceedings, 2004, 821, 91.	0.1	0
186	Vibrational modes on the $\sqrt{3} \times \sqrt{3} R\bar{3}0^{\circ}$ - NaAl ₂ surface. Russian Physics Journal, 2004, 47, 1147-1153.	0.2	0
187	Ab-initio Investigations of Surface Electronic Structure and Metal-Hydrogen Interaction in Titanium- and Palladium-Based Alloys. AIP Conference Proceedings, 2007, , .	0.3	0
188	Vibrations of linear cobalt clusters on a stepped copper surface. Russian Physics Journal, 2009, 52, 76-84.	0.2	0
189	Surfactant properties of cesium in molecular beam epitaxy of GaAs(100). JETP Letters, 2011, 93, 585-590.	0.4	0
190	Formation of the bismuth-bilayer film at BiTeCl surface by atomic hydrogen deposition. Surface Science, 2017, 661, 10-15.	0.8	0
191	Phonons on Cu(001) surface covered by submonolayer alkali metals. Journal of Physics Condensed Matter, 2019, 31, 125001.	0.7	0
192	Heterostructures Based on Magnetic and Topological Insulators. Russian Physics Journal, 2019, 61, 1964-1970.	0.2	0
193	COMMENSURATE LONG-PERIOD NANOSTRUCTURES IN ALLOYS. , 2003, , .		0
194	10.1007/s11451-008-2018-8. , 2010, 50, 323.		0
195	10.1007/s11451-008-3025-5. , 2010, 50, 543.		0
196	Natural Topological Insulator Heterostructures. Springer Handbooks, 2020, , 449-470.	0.3	0