Hasan ÅahÄºn

List of Publications by Year
in descending order

144 papers	13,881 citations	38742 50 h-index	20358 116 g-index
144 all docs	144 docs citations	144 times ranked	13235 citing authors

#	Article	IF	Citations
1	Interface-dependent phononic and optical properties of GeO/MoSO heterostructures. Nanoscale, 2022, 14, 865-874.	5.6	5
2	Magnetic single-layer nanoribbons of manganese oxide: edge- and width-dependent electronic properties. Journal of Materials Chemistry C, 2022, 10, 7567-7574.	5.5	1
3	Experimental modeling of antimony sulfides-rich geothermal deposits and their solubility in the presence of polymeric antiscalants. Geothermics, 2022, 104, 102452.	3.4	3
4	Stable Janus TaSe2 single-layers via surface functionalization. Applied Surface Science, 2021, 538, 148064.	6.1	7
5	Electronic and magnetic properties of single-layer FeCl2 with defects. Physical Review B, 2021, 103, .	3.2	9
6	Ultra-thin structures of manganese fluorides: conversion from manganese dichalcogenides by fluorination. Physical Chemistry Chemical Physics, 2021, 23, 10218-10224.	2.8	1
7	Toward single-layer Janus crystals: Off-balance materials from synthesis to nanotechnology applications. Journal of Applied Physics, 2021, 129, .	2.5	4
8	Origin of anomalous band-gap bowing in two-dimensional tin-lead mixed perovskite alloys. Physical Review B, 2021, 104, .	3.2	9
9	Cesium manganese chloride: Stable lead-free perovskite from bulk to single layer. Journal of Magnetism and Magnetic Materials, 2021, 531, 167845.	2.3	6
10	Electronic properties of intrinsic vacancies in single-layer CaF2 and its heterostructure with monolayer MoS2. Journal of Applied Physics, 2021, 130, .	2.5	3
11	First-Principles Investigation of Structural, Raman and Electronic Characteristics of Single Layer Ge3N4. Applied Surface Science, 2021, 572, 151361.	6.1	1
12	Vibrational and optical identification of GeO₂ and GeO single layers: a first-principles study. Physical Chemistry Chemical Physics, 2021, 23, 21307-21315.	2.8	3
13	Raman and optical characteristics of van der Waals heterostructures of single layers of GaP and GaSe: a first-principles study. Inorganic Chemistry Frontiers, 2021, 8, 2771-2781.	6.0	2
14	Structural, electronic and vibrational properties of ultra-thin octahedrally coordinated structure of EuO2. Journal of Magnetism and Magnetic Materials, 2020, 493, 165668.	2.3	1
15	Parametrizing nonbonded interactions between silica and water from first principles. Applied Surface Science, 2020, 504, 144359.	6.1	7
16	Interaction of Ge with single layer GaAs: From Ge-island nucleation to formation of novel stable monolayers. Applied Surface Science, 2020, 505, 144218.	6.1	1
17	Vanadium dopant- and strain-dependent magnetic properties of single-layer VI3. Applied Surface Science, 2020, 508, 144937.	6.1	30
18	The effect of DOPA hydroxyl groups on wet adhesion to polystyrene surface: An experimental and theoretical study. Materials Chemistry and Physics, 2020, 243, 122606.	4.0	8

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19	Kagome-like silicene: A novel exotic form of two-dimensional epitaxial silicon. Applied Surface Science, 2020, 530, 147195.	6.1	18
20	Novel ultra-thin two-dimensional structures of strontium chloride. Journal of Materials Chemistry C, 2020, 8, 12527-12532.	5.5	2
21	Prevalence of oxygen defects in an in-plane anisotropic transition metal dichalcogenide. Physical Review B, 2020, 102, .	3.2	10
22	Stable single-layers of calcium halides (CaX₂, X = F, Cl, Br, I). Journal of Chemical Physics, 2020, 152, 164116.	3.0	13
23	Fabrication of a Postfunctionalizable, Biorepellent, Electroactive Polyurethane Interface on a Gold Surface by Surface-Assisted Polymerization. Langmuir, 2020, 36, 6828-6836.	3.5	7
24	Quantum properties and applications of 2D Janus crystals and their superlattices. Applied Physics Reviews, 2020, 7, .	11.3	156
25	Octahedrally coordinated single layered CaF₂: robust insulating behaviour. Physical Chemistry Chemical Physics, 2020, 22, 2949-2954.	2.8	11
26	Orthorhombic CsPbI3 perovskites: Thickness-dependent structural, optical and vibrational properties. Computational Condensed Matter, 2020, 23, e00453.	2.1	8
27	Functionalization of single-layer TaS₂ and formation of ultrathin Janus structures. Journal of Materials Research, 2020, 35, 1397-1406.	2.6	4
28	Two-Dimensional Covalent Crystals by Chemical Conversion of Thin van der Waals Materials. Nano Letters, 2019, 19, 6475-6481.	9.1	32
29	Color-Tunable All-Inorganic CsPbBr₃ Perovskites Nanoplatelet Films for Photovoltaic Devices. ACS Applied Nano Materials, 2019, 2, 5149-5155.	5.0	3
30	Defect tolerant and dimension dependent ferromagnetism in MnSe₂. Physical Chemistry Chemical Physics, 2019, 21, 16718-16725.	2.8	18
31	Stacking-dependent excitonic properties of bilayer blue phosphorene. Physical Review B, 2019, 100, .	3.2	17
32	Gd³⁺-Doped Î±-CsPbI₃ Nanocrystals with Better Phase Stability and Optical Properties. Journal of Physical Chemistry C, 2019, 123, 24865-24872.	3.1	55
33	Single-Layer Janus-Type Platinum Dichalcogenides and Their Heterostructures. Journal of Physical Chemistry C, 2019, 123, 4549-4557.	3.1	81
34	Monitoring the crystal orientation of black-arsenic via vibrational spectra. Journal of Materials Chemistry C, 2019, 7, 1228-1236.	5.5	13
35	Experimental and first-principles investigation of Cr-driven color change in cesium lead halide perovskites. Journal of Applied Physics, 2019, 125, 225705.	2.5	3
36	Green fabrication of lanthanide-doped hydroxide-based phosphors: Y(OH)₃:Eu³⁺ nanoparticles for white light generation. Beilstein Journal of Nanotechnology, 2019, 10, 1200-1210.	2.8	2

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37	Raman fingerprint of stacking order in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>HfS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> heterobilayer. Physical Review B, 2019, 99, .	3.2	26
38	Vertical van der Waals Heterostructure of Single Layer InSe and SiGe. Journal of Physical Chemistry C, 2019, 123, 31232-31237.	3.1	14
39	Increasing solubility of metal silicates by mixed polymeric antiscalants. Geothermics, 2019, 77, 106-114.	3.4	16
40	Janus single layers of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>In</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> : A first-principles study. Physical Review B, 2018, 97, .	3.2	127
41	Tuning electronic and magnetic properties of monolayer Î±-RuCl₃ by in-plane strain. Journal of Materials Chemistry C, 2018, 6, 2019-2025.	5.5	47
42	Monitoring the Doping and Diffusion Characteristics of Mn Dopants in Cesium Lead Halide Perovskites. Journal of Physical Chemistry C, 2018, 122, 11543-11549.	3.1	15
43	Theoretical and experimental investigation of conjugation of 1,6-hexanedithiol on MoS₂. Materials Research Express, 2018, 5, 036415.	1.6	9
44	Strain mapping in single-layer two-dimensional crystals via Raman activity. Physical Review B, 2018, 97, .	3.2	43
45	Experimental and computational investigation of graphene/SAMs/n-Si Schottky diodes. Applied Surface Science, 2018, 428, 1010-1017.	6.1	11
46	Hydrogenated derivatives of hexacoordinated metallic Cu₂Si monolayer. RSC Advances, 2018, 8, 39976-39982.	3.6	2
47	Enhanced Stability of Single-Layer w-Gallenene through Hydrogenation. Journal of Physical Chemistry C, 2018, 122, 28302-28309.	3.1	25
48	Monitoring the effect of asymmetrical vertical strain on Janus single layers of MoSSe via vibrational spectrum. Journal of Chemical Physics, 2018, 149, 084707.	3.0	13
49	Monolayer AsTe₂: Stable Robust Metal in 2D, 1D and 0D. ChemPhysChem, 2018, 19, 2176-2182.	2.1	3
50	Electronic and vibrational properties of PbI2 : From bulk to monolayer. Physical Review B, 2018, 98, .	3.2	49
51	Ab initio and semiempirical modeling of excitons and trions in monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>TiS</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math> Physical Review B, 2018, 98, .	3.2	14
52	Structural, electronic and phononic properties of PtSe₂: from monolayer to bulk. Semiconductor Science and Technology, 2018, 33, 085002.	2.0	82
53	Bilayers of Janus WSSe: monitoring the stacking type via the vibrational spectrum. Physical Chemistry Chemical Physics, 2018, 20, 17380-17386.	2.8	56
54	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>CsPbBr</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math> perovskites: Theoretical and experimental investigation on water-assisted transition from nanowire formation to degradation. Physical Review Materials, 2018, 2, .	2.4	63

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55	Atomic-scale understanding of dichlorobenzene-assisted poly 3-hexylthiophene-2,5-diyl nanowire formation mechanism. Journal of Molecular Structure, 2017, 1134, 681-686.	3.6	2
56	Angle resolved vibrational properties of anisotropic transition metal trichalcogenide nanosheets. Nanoscale, 2017, 9, 4175-4182.	5.6	64
57	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>h</mml:mi><mml:mtext>-AlN-</mml:mtext><mml:mtext>Mg</mml:mtext><mml:mi>O</mml:mi></mml:math> van der Waals bilayer heterostructure: Tuning the excitonic characteristics. Physical Review B, 2017, 95, .	3.2	20
58	Fundamental mechanisms responsible for the temperature coefficient of resonant frequency in microwave dielectric ceramics. Journal of the American Ceramic Society, 2017, 100, 1508-1516.	3.8	16
59	Hydrogen-induced structural transition in single layer ReS ₂. 2D Materials, 2017, 4, 035013.	4.4	26
60	Ultra-thin ZnSe: Anisotropic and flexible crystal structure. Applied Surface Science, 2017, 409, 426-430.	6.1	8
61	Thinning <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>CsPb</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi>Br</mml:mi></mml:mrow></mml:math> perovskite down to monolayers: Cs-dependent stability. Physical Review B, 2017, 96, .	3.2	26
62	Hydrogenation-driven phase transition in single-layer TiSe₂. Nanotechnology, 2017, 28, 495709.	2.6	6
63	Few-layer MoS₂as nitrogen protective barrier. Nanotechnology, 2017, 28, 415706.	2.6	6
64	Stability, electronic and phononic properties ofÎ²and 1T structures of SiTe_x(x= 1, 2) and their vertical heterostructures. Journal of Physics Condensed Matter, 2017, 29, 395504.	1.8	6
65	Hydrogen-induced <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>s</mml:mi><mml:msup><mml:mi>p</mml:mi><mml:mi>x</mml:mi></mml:msup></mml:mrow></mml:math> rehybridization in epitaxial silicene. Physical Review B, 2017, 96, .	3.2	14
66	Stable monolayer Î±-phase of CdTe: strain-dependent properties. Journal of Materials Chemistry C, 2017, 5, 12249-12255.	5.5	9
67	Stable ultra-thin CdTe crystal: a robust direct gap semiconductor. Journal of Physics Condensed Matter, 2017, 29, 485302.	1.8	4
68	2D vibrational properties of epitaxial silicene on Ag(111). 2D Materials, 2017, 4, 015008.	4.4	39
69	Introduction to the Physics of Silicene and other 2D Materials. Lecture Notes in Physics, 2017, , .	0.7	33
70	A Brief History of Silicene. Lecture Notes in Physics, 2017, , 1-11.	0.7	0
71	Freestanding Silicene. Lecture Notes in Physics, 2017, , 13-39.	0.7	3
72	Silicene on Ag Substrate. Lecture Notes in Physics, 2017, , 41-52.	0.7	1

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73	Multilayer Silicene. Lecture Notes in Physics, 2017, , 53-61.	0.7	0
74	Germanene, Stanene and Other 2D Materials. Lecture Notes in Physics, 2017, , 63-85.	0.7	4
75	Strain Engineering of 2D Materials. Lecture Notes in Physics, 2017, , 87-96.	0.7	3
76	Î±-Silicene as oxidation-resistant ultra-thin coating material. Beilstein Journal of Nanotechnology, 2017, 8, 1808-1814.	2.8	3
77	Adsorption and diffusion characteristics of lithium on hydrogenated Î±- and Î²-silicene. Beilstein Journal of Nanotechnology, 2017, 8, 1742-1748.	2.8	1
78	Mechanical properties of monolayer GaS and GaSe crystals. Physical Review B, 2016, 94, .	3.2	122
79	Unusual dimensionality effects and surface charge density in 2D Mg(OH)2. Scientific Reports, 2016, 6, 20525.	3.3	49
80	Anisotropic electronic, mechanical, and optical properties of monolayer WTe2. Journal of Applied Physics, 2016, 119, .	2.5	76
81	Nanoribbons: From fundamentals to state-of-the-art applications. Applied Physics Reviews, 2016, 3, .	11.3	77
82	Giant magnetic anisotropy in doped single layer molybdenum disulfide and fluorographene. Journal of Physics Condensed Matter, 2016, 28, 195301.	1.8	6
83	Quantumâ€Transport Characteristics of a pâ€“n Junction on Singleâ€Layer TiS₃. ChemPhysChem, 2016, 17, 3985-3991.	2.1	12
84	Controlled growth mechanism of poly (3-hexylthiophene) nanowires. Nanotechnology, 2016, 27, 455604.	2.6	25
85	Strong dichroic emission in the pseudo one dimensional material ZrS₃. Nanoscale, 2016, 8, 16259-16265.	5.6	63
86	Single layer PbI2: hydrogenation-driven reconstructions. RSC Advances, 2016, 6, 89708-89714.	3.6	10
87	Optical properties of GaS-Ca(OH)<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>bilayer heterostructure. Physical Review B, 2016, 93, .	3.2	18
88	New family of graphene-based organic semiconductors: An investigation of photon-induced electronic structure manipulation in half-fluorinated graphene. Physical Review B, 2016, 93, .	3.2	5
89	Bilayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SnS</mml:mi><mml:mn>2</mml:mn></mml:msub></m Tunable stacking sequence by charging and loading pressure. Physical Review B, 2016, 93, .	3.2	51
90	Structural changes in a Schiff base molecular assembly initiated by scanning tunneling microscopy tip. Nanotechnology, 2016, 27, 335601.	2.6	4

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91	Unusual lattice vibration characteristics in whiskers of the pseudo-one-dimensional titanium trisulfide TiS3. Nature Communications, 2016, 7, 12952.	12.8	69
92	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mg</mml:mi><mml:msub><mml:mrow><mml:mo>(</mml:mo> van der Waals heterobilayer: Electric field tunable band-gap crossover. Physical Review B, 2016, 94, .	3.2	40
93	Computing optical properties of ultraâ€thin crystals. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2016, 6, 351-368.	14.6	15
94	Exciton pumping across type-I gallium chalcogenide heterojunctions. Nanotechnology, 2016, 27, 065203.	2.6	26
95	Portlandite crystal: Bulk, bilayer, and monolayer structures. Physical Review B, 2015, 91, .	3.2	34
96	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>TiS</mml:mi><mml:mn>3</mml:mn></mml:msub></mml Width-independent band gap and strain-tunable electronic properties. Physical Review B, 2015, 92, .	3.2	58
97	Structural and phononic characteristics of nitrogenated holey graphene. Physical Review B, 2015, 92, .	3.2	80
98	Tuning the magnetic anisotropy in single-layer crystal structures. Physical Review B, 2015, 92, .	3.2	37
99	Hexagonal AlN: Dimensional-crossover-driven band-gap transition. Physical Review B, 2015, 91, .	3.2	121
100	Stable half-metallic monolayers of FeCl2. Applied Physics Letters, 2015, 106, .	3.3	108
101	Graphane. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2015, 5, 255-272.	14.6	53
102	Electronic and magnetic properties of 1 T-TiSe ₂ nanoribbons. 2D Materials, 2015, 2, 044002.	4.4	21
103	Tuning the Optical, Magnetic, and Electrical Properties of ReSe₂ by Nanoscale Strain Engineering. Nano Letters, 2015, 15, 1660-1666.	9.1	363
104	Realization of a pâ€“n junction in a single layer boron-phosphide. Physical Chemistry Chemical Physics, 2015, 17, 13013-13020.	2.8	112
105	Environmental Changes in MoTe₂ Excitonic Dynamics by Defects-Activated Molecular Interaction. ACS Nano, 2015, 9, 5326-5332.	14.6	166
106	Vacancy Formation and Oxidation Characteristics of Single Layer TiS₃. Journal of Physical Chemistry C, 2015, 119, 10709-10715.	3.1	51
107	Tuning Carrier Confinement in the MoS₂/WS₂ Lateral Heterostructure. Journal of Physical Chemistry C, 2015, 119, 9580-9586.	3.1	74
108	Structural Transitions in Monolayer MoS₂by Lithium Adsorption. Journal of Physical Chemistry C, 2015, 119, 10602-10609.	3.1	109

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109	Mechanical properties of monolayer sulphides: a comparative study between MoS₂, HfS₂ and TiS₃. Physical Chemistry Chemical Physics, 2015, 17, 27742-27749.	2.8	99
110	Engineering excitonic dynamics and environmental stability of post-transition metal chalcogenides by pyridine functionalization technique. Nanoscale, 2015, 7, 17109-17115.	5.6	12
111	Pentagonal monolayer crystals of carbon, boron nitride, and silver azide. Journal of Applied Physics, 2015, 118, .	2.5	91
112	Monolayers of MoS2 as an oxidation protective nanocoating material. Journal of Applied Physics, 2014, 116, .	2.5	55
113	Ag and Au atoms intercalated in bilayer heterostructures of transition metal dichalcogenides and graphene. APL Materials, 2014, 2, 092801.	5.1	11
114	Formation and stability of point defects in monolayer rhenium disulfide. Physical Review B, 2014, 89, .	3.2	151
115	Ferromagnetism in stacked bilayers of Pd/C60. Journal of Magnetism and Magnetic Materials, 2014, 349, 128-134.	2.3	9
116	Monolayer behaviour in bulk ReS2 due to electronic and vibrational decoupling. Nature Communications, 2014, 5, 3252.	12.8	906
117	Formation and diffusion characteristics of Pt clusters on Graphene, 1Hâ€MoS₂ and 1Tâ€TaS₂. Annalen Der Physik, 2014, 526, 423-429.	2.4	13
118	Luminescence, Patterned Metallic Regions, and Photon-Mediated Electronic Changes in Single-Sided Fluorinated Graphene Sheets. ACS Nano, 2014, 8, 7801-7808.	14.6	28
119	Tuning of the electronic and optical properties of single-layer black phosphorus by strain. Physical Review B, 2014, 90, .	3.2	279
120	Doping of rhenium disulfide monolayers: a systematic first principles study. Physical Chemistry Chemical Physics, 2014, 16, 16771-16779.	2.8	62
121	First-principles investigation of B- and N-doped fluorographene. Physical Review B, 2013, 88, .	3.2	11
122	Stone-Wales defects in silicene: Formation, stability, and reactivity of defect sites. Physical Review B, 2013, 88, .	3.2	108
123	Adsorption and absorption of boron, nitrogen, aluminum, and phosphorus on silicene: Stability and electronic and phonon properties. Physical Review B, 2013, 87, .	3.2	186
124	Phonon softening and direct to indirect band gap crossover in strained single-layer MoSe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2013, 87, .	3.2	200
125	Anomalous Raman spectra and thickness-dependent electronic properties of WSe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2013, 87, .	3.2	408
126	Adsorption of alkali, alkaline-earth, and 3<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>d</mml:mi></mml:math>transition metal atoms on silicene. Physical Review B, 2013, 87, .	3.2	282

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127	Chlorine Adsorption on Graphene: Chlorographene. Journal of Physical Chemistry C, 2012, 116, 24075-24083.	3.1	135
128	Frictional Figures of Merit for Single Layered Nanostructures. Physical Review Letters, 2012, 108, 126103.	7.8	110
129	Stable, Single-Layer MX₂ Transition-Metal Oxides and Dichalcogenides in a Honeycomb-Like Structure. Journal of Physical Chemistry C, 2012, 116, 8983-8999.	3.1	1,196
130	Graphene coatings: An efficient protection from oxidation. Physical Review B, 2012, 85, .	3.2	178
131	Adsorption of carbon adatoms to graphene and its nanoribbons. Journal of Applied Physics, 2011, 109, 013704.	2.5	59
132	Structural, mechanical, and electronic properties of defect-patterned graphene nanomeshes from first principles. Physical Review B, 2011, 84, .	3.2	76
133	Mechanical and Electronic Properties of MoS₂ Nanoribbons and Their Defects. Journal of Physical Chemistry C, 2011, 115, 3934-3941.	3.1	427
134	Structures of fluorinated graphene and their signatures. Physical Review B, 2011, 83, .	3.2	254
135	Spintronic properties of zigzag-edged triangular graphene flakes. Journal of Applied Physics, 2010, 108, .	2.5	65
136	Electronic and magnetic properties of graphane nanoribbons. Physical Review B, 2010, 81, .	3.2	136
137	Monolayer honeycomb structures of group-IV elements and III-V binary compounds: First-principles calculations. Physical Review B, 2009, 80, .	3.2	1,769
138	Two- and One-Dimensional Honeycomb Structures of Silicon and Germanium. Physical Review Letters, 2009, 102, 236804.	7.8	2,837
139	Magnetization of graphane by dehydrogenation. Applied Physics Letters, 2009, 95, .	3.3	110
140	First-principles calculations of spin-dependent conductance of graphene flakes. Physical Review B, 2008, 78, .	3.2	93
141	Temperature dependence of critical currents of two-gap superconductors. EPJ Applied Physics, 2006, 36, 267-270.	0.7	5
142	Analysis of Fertility in Turkey: The Importance of Future Fertility Preferences. Sosyoekonomi, 0, , 223-234.	0.8	2
143	Enhanced stability and optical properties of Gd3+ doped CsPbI3 nanocrystals. , 0, , .		0
144	Enhanced stability and optical properties of Gd3+ doped CsPbI3 nanocrystals. , 0, , .		0