

# Ryoichi Akimoto

## List of Publications by Year in descending order

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128  
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128  
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128  
docs citations

128  
times ranked

524  
citing authors

#	ARTICLE	IF	CITATIONS
1	All-optical demultiplexing of 160 Gbit/s signals with Mach-Zehnder interferometric switch utilizing intersubband transition in InGaAs/AlAsSb quantum well. Applied Physics Letters, 2007, 91, 2211-15.	3.2	62
2	Short-wavelength intersubband transitions down to 1.6 $\mu$ m in ZnSe/BeTe type-II superlattices. Applied Physics Letters, 2001, 78, 580-582.	3.2	59
3	Larmor precession of Mn <sup>2+</sup> moments initiated by the exchange field of photoinjected carriers in CdTe/Cd <sub>1-x</sub> MnxTe quantum wells. Physical Review B, 1998, 57, 7208-7213.	3.3	54
4	Sub-picosecond electron relaxation of near-infrared intersubband transitions in n-doped (CdS/ZnSe)/BeTe quantum wells. Applied Physics Letters, 2002, 81, 2998-3000.	3.2	51
5	Subpicosecond saturation of intersubband absorption in (CdS/ZnSe)/BeTe quantum-well waveguides at telecommunication wavelength. Applied Physics Letters, 2005, 87, 1811-104.	3.2	48
6	Magnetic and transport properties of III-V diluted magnetic semiconductor Ga <sub>1-x</sub> CrxAs. Journal of Applied Physics, 2001, 89, 7392-7394.	2.3	42
7	A Three-Dimensional Silicon Nitride Polarizing Beam Splitter. IEEE Photonics Technology Letters, 2014, 26, 706-709.	2.5	39
8	Low-saturation-energy-driven ultrafast all-optical switching operation in (CdS/ZnSe)/BeTe intersubband transition. Optics Express, 2007, 15, 12123.	3.3	37
9	Asymmetric Silicon Slot-Waveguide-Assisted Polarizing Beam Splitter. IEEE Photonics Technology Letters, 2016, 28, 1294-1297.	2.5	37
10	Carrier spin dynamics in CdTe/Cd <sub>1-x</sub> MnxTe quantum wells. Physical Review B, 1997, 56, 9726-9733.	3.3	36
11	Optical control of Larmor precession of Mn <sup>2+</sup> moments in CdTe/Cd <sub>1-x</sub> MnxTe quantum wells. Journal of Applied Physics, 1998, 84, 6318-6320.	2.3	31
12	Mechanism of ultrafast modulation of the refraction index in photoexcited $\ln \left( \frac{\mu_0 \mu_1}{\mu_0 \mu_1} \right)$ Physical Review B, 2008, 78, .	3.3	25
13	Ultrafast All-Optical Refractive Index Modulation in Intersubband Transition Switch Using InGaAs/AlAs/AlAsSb Quantum Well. Japanese Journal of Applied Physics, 2007, 46, L157-L160.	1.6	24
14	Cross Phase Modulation Efficiency Enhancement in In <sub>0.8</sub> Ga <sub>0.2</sub> As/Al <sub>0.5</sub> Ga <sub>0.5</sub> As/Al <sub>0.56</sub> Sb <sub>0.44</sub> Coupled Double Quantum Wells by Tailoring Interband Transition Wavelength. Applied Physics Express, 0, 2, 042201.	2.4	23
15	Silicon nitride polarizing beam splitter with potential application for intersubband-transition-based all-optical gate device. Japanese Journal of Applied Physics, 2015, 54, 04DG08.	1.6	20
16	Short-wavelength ( $\lambda < 2 \mu$ m) intersubband absorption dynamics in ZnSe/BeTe quantum wells. Applied Physics Letters, 2002, 80, 2433-2435.	3.2	18
17	Structural study of (CdS/ZnSe)/BeTe superlattices for $\lambda = 1.55 \mu$ m intersubband transition. Journal of Applied Physics, 2004, 95, 5352-5359.	2.3	18
18	Optically induced long-lived electron spin coherence in ZnSe/BeTe type-II quantum wells. Applied Physics Letters, 2008, 92, 153101.	3.2	18

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19	Vertically Coupled Silicon Nitride Microdisk Resonant Filters. IEEE Photonics Technology Letters, 2014, 26, 2391-2394.	2.5	17
20	Study of the shrinkage caused by holographic grating formation in acrylamide based photopolymer film. Optics Express, 2011, 19, 13386.	3.3	16
21	Band edge tailoring of InGaAs/AlAsSb coupled double quantum wells for a monolithically integrated all-optical switch. Optics Express, 2013, 21, 15840.	3.3	15
22	T-Shape Suspended Silicon Nitride Ring Resonator for Optical Sensing Applications. IEEE Photonics Technology Letters, 2015, 27, 1601-1604.	2.5	15
23	Intersubband Transition Based on a Novel II-VI Quantum Well Structure for Ultrafast All-Optical Switching. Japanese Journal of Applied Physics, 2004, 43, 1973-1977.	1.6	12
24	High-speed all-optical modulation using an InGaAs/AlAsSb quantum well waveguide. Optics Express, 2008, 16, 9684.	3.3	12
25	Experimental and theoretical study of cross-phase modulation in InGaAs/AlAsSb coupled double quantum wells with a AlGaAs coupling barrier. Physical Review B, 2009, 80, .	3.3	12
26	Low-threshold-current yellow BeZnCdSe quantum-well ridge-waveguide laser diodes under continuous-wave room-temperature operation. Applied Physics Express, 2016, 9, 012101.	2.4	12
27	Three-Dimensional Cross-Coupled Silicon Nitride Racetrack Resonator-Based Tunable Optical Filter. IEEE Photonics Technology Letters, 2017, 29, 771-774.	2.5	12
28	$\lambda = 1.49\text{--}3.4\ \mu\text{m}$ intersubband absorptions in (CdS $\hat{\cdot}$ ZnSe) $\hat{\cdot}$ BeTe quantum wells grown by molecular beam epitaxy. Applied Physics Letters, 2006, 88, 221915.	3.2	11
29	Intersubband absorption with different sublevel couplings in [(CdS $\hat{\cdot}$ ZnSe) $\hat{\cdot}$ BeTe] $\hat{\cdot}$ (ZnSe $\hat{\cdot}$ BeTe)] double quantum wells. Applied Physics Letters, 2007, 90, 181919.	3.2	11
30	Enhancement of All-Optical Cross Phase Modulation in InGaAs/AlAsSb Coupled Quantum Wells Using InAlAs Coupling Barriers. IEEE Photonics Technology Letters, 2008, 20, 2183-2185.	2.5	11
31	All-Optical Demultiplexing from 160 to 40/80 Gb/s Using Mach-Zehnder Switches Based on Intersubband Transition of InGaAs/AlAsSb Coupled Double Quantum Wells. IEICE Transactions on Electronics, 2009, E92-C, 187-193.	0.6	11
32	Demonstration of 172-Gb/s Optical Time Domain Multiplexing and Demultiplexing Using Integratable Semiconductor Devices. IEEE Photonics Technology Letters, 2010, 22, 1416-1418.	2.5	11
33	Spin dependent transitions of charged excitons in type-II quantum wells. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 22, 632-635.	2.8	10
34	Vertically integrated waveguide self-coupled resonator based tunable optical filter. Optics Letters, 2018, 43, 3766.	3.3	10
35	Scanning-tunneling-microscopy observation of heterojunctions with a type-II band alignment in ZnSe $\hat{\cdot}$ BeTe multiple quantum wells. Applied Physics Letters, 2005, 86, 153112.	3.2	9
36	Electric- and magnetic-field effects on radiative recombination in modulation n-doped ZnSe/BeTe type-II quantum wells. Semiconductor Science and Technology, 2006, 21, 87-90.	2.1	9

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37	Intersubband all-optical switching in submicron high-mesa SCH waveguide structure with wide-gap II-VI-based quantum wells. <i>Electronics Letters</i> , 2006, 42, 1352.	1.0	9
38	ZnSe interlayer effects on properties of (CdS <sub>1-x</sub> ZnSe) <sub>x</sub> /BeTe superlattices grown by molecular beam epitaxy. <i>Journal of Applied Physics</i> , 2006, 99, 044912.	2.3	9
39	What is the origin of very strong photoluminescence in ZnSe/BeTe superlattices at liquid helium temperature?. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2004, 22, 640-643.	2.8	8
40	Simultaneous generation of intersubband absorption and quantum well intermixing through silicon ion implantation in undoped InGaAs/AlAsSb coupled double quantum wells. <i>Applied Physics Letters</i> , 2010, 96, .	3.2	8
41	Ultrafast all-optical switch with cross-phase modulation by area-selective ion implantation in InGaAs/AlAsSb coupled double quantum wells. <i>Optics Express</i> , 2012, 20, B279.	3.3	8
42	Dynamic Optical Path Switching in 172-Gb/s OTDM Transmissions of Ultra-High Definition Video Signals Using Fast Channel-Identifiable Clock Recovery and Integratable Devices. <i>Journal of Lightwave Technology</i> , 2013, 31, 594-601.	4.7	8
43	Silicon nitride based polarization-independent 4×4 optical matrix switch. <i>Optics and Laser Technology</i> , 2019, 119, 105641.	4.6	8
44	Dual-Layer Cross-Coupled Tunable Resonator System in a Three-Dimensional Silicon Photonic Integration Platform. <i>Journal of Lightwave Technology</i> , 2019, 37, 3298-3304.	4.7	8
45	Ultrafast intersubband optical switching in II-VI-based quantum well for optical fiber communications. <i>Physica Status Solidi (B): Basic Research</i> , 2006, 243, 805-812.	1.6	7
46	Spatially direct charged exciton photoluminescence in undoped ZnSe/BeTe type-II quantum wells. <i>Applied Physics Letters</i> , 2008, 92, 093107.	3.2	7
47	Optically injected electron gas and formation of charged excitons in type-II ZnSe/BeTe quantum wells. <i>Journal of Physics: Conference Series</i> , 2006, 51, 399-402.	0.4	6
48	Thermal annealing effects on intersubband transitions in (CdS <sub>1-x</sub> ZnSe) <sub>x</sub> /BeTe quantum wells. <i>Applied Physics Letters</i> , 2008, 92, 021123.	3.2	6
49	Ultrafast electron dynamics of intersubband excitation concerning cross-phase modulation in an InGaAs/AlAs/AlAsSb coupled double quantum well. <i>Applied Physics Letters</i> , 2011, 98, 251104.	3.2	6
50	BeZnCdSe quantum-well ridge-waveguide laser diodes under low threshold room-temperature continuous-wave operation. <i>Applied Physics Letters</i> , 2015, 107, .	3.2	6
51	Double-Layer Cross-Coupled Silicon Nitride Multi-Ring Resonator Systems. <i>IEEE Photonics Technology Letters</i> , 2020, 32, 227-230.	2.5	6
52	Coherent spin transient of exciton in quantum wells. <i>Journal of Luminescence</i> , 1997, 72-74, 309-311.	3.2	5
53	All-Optical Cross-Phase Modulation Generation by Ion Implantation in III-V Quantum Wells. <i>IEEE Photonics Technology Letters</i> , 2010, 22, 1820-1822.	2.5	5
54	Dresselhaus field-induced anisotropic spin propagation in ZnSe/BeTe type-II quantum wells. <i>Applied Physics Letters</i> , 2011, 99, 161901.	3.2	5

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55	Vertically Coupled Suspended Silicon Nitride Microdisk-Based Optical Sensor. IEEE Photonics Technology Letters, 2018, 30, 1507-1510.	2.5	5
56	Exciton formation dynamics in crescent-shaped Quantum Wires. Applied Physics Letters, 2002, 81, 3642-3644.	3.2	4
57	Spatially indirect photoluminescence of ZnSe/BeTe type II quantum wells in pulsed high magnetic fields. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 38-41.	0.8	4
58	Ultrafast All-Optical Gating Operation Using Michelson Interferometer for Hybrid Integration of Intersubband Transition Switch on Si Platform. IEEE Photonics Technology Letters, 2011, 23, 1884-1886.	2.5	4
59	Green/yellow luminescence from highly strained BeZnCdSe quantum wells grown by molecular beam epitaxy. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 255-258.	0.8	4
60	A ZnSe/BeTe p-grading superlattice with a low voltage drop for efficient hole injection in green-yellow BeZnCdSe quantum well laser. Proceedings of SPIE, 2015, , .	1.0	4
61	Composition Profile of ZnSe/BeTe Multiple Quantum Well Structures Studied by Cross-Sectional Scanning Tunneling Microscopy. Japanese Journal of Applied Physics, 2005, 44, L1337-L1340.	1.6	3
62	Optical de Haas oscillations of charged excitons in type-II ZnSe/BeTe quantum wells. Journal of Physics: Conference Series, 2006, 51, 427-430.	0.4	3
63	1.3 $\mu\text{m}$ Distributed Feedback Laser with Half-Etching Mesa and High-Density Quantum Dots. Japanese Journal of Applied Physics, 2009, 48, 050203.	1.6	3
64	Spatially separated indirect photoemission in undoped ZnSe/BeTe type-II quantum wells studied in pulse magnetic fields. Semiconductor Science and Technology, 2009, 24, 115011.	2.1	3
65	An 88 fs fiber soliton laser using a quantum well saturable absorber with an ultrafast intersubband transition. Optics Express, 2009, 17, 22499.	3.3	3
66	Observation of interface carrier states in no-common-atom heterostructures ZnSe/BeTe. Nanotechnology, 2011, 22, 365707.	2.7	3
67	All-optical XOR logic gate using intersubband transition in III-V quantum well materials. Optics Express, 2014, 22, 12861.	3.3	3
68	Recombination-Enhanced Effect in Green/Yellow Luminescence from BeZnCdSe Quantum Wells Grown by Molecular Beam Epitaxy. Journal of Electronic Materials, 2018, 47, 4226-4233.	2.2	3
69	Near-infrared intersubband absorption in (CdS/ZnSe)/BeTe type-II super-lattices grown on GaAs substrate by MBE. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 34, 276-279.	2.8	2
70	Intersub-Band Transition All-Optical Gate Switches. , 0, , 155-200.		2
71	Type-I interband transition in undoped ZnSe/BeTe type-II quantum wells under high excitation density. Semiconductor Science and Technology, 2009, 24, 095016.	2.1	2
72	172-Gbps cascaded OTDM MUX and DEMUX operations of 43G VSR transceivers using integratable semiconductor devices. , 2010, , .		2

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73	Four-wave mixing in InGaAs/AlAsSb intersubband transition optical waveguides. Journal of Applied Physics, 2011, 110, .	2.3	2
74	Dynamic Optical Path Switching of 172-Gbit/s OTDM Ultra-High Definition Video Signals Using Fast Channel-Identifiable Clock Recovery and Integratable Devices. , 2012, , .		2
75	A comparative study of the operational characteristics of CdSe quantum dots and BeZnCdSe quantum well laser diodes. Journal of Applied Physics, 2020, 127, 013101.	2.3	2
76	Bright photoemission from interacting excitons at the interface localized sites in CdS/ZnSe type-II quantum structures. AIP Conference Proceedings, 2007, , .	0.2	2
77	Excitonic coherent gain induced by giant Zeeman splitting in Cd <sub>1-x</sub> Mn <sub>x</sub> Te quantum wells. Journal of Crystal Growth, 2000, 214-215, 415-419.	1.6	1
78	Magnetic field enhanced luminescence in ZnSe/BeMnTe multiple quantum wells with a type II band alignment. Journal of Luminescence, 2004, 108, 65-68.	3.2	1
79	Shorter wavelength intersubband absorption down to $\lambda = 1.55 \text{ }\mu\text{m}$ in (CdS/ZnSe)/BeTe type-II superlattices. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 1147-1151.	0.8	1
80	Fabrication of High-Mesa Waveguides Based on Wide-Band-Gap II-VI Semiconductors for Telecom Wavelength Applications. Japanese Journal of Applied Physics, 2007, 46, 200-204.	1.6	1
81	Simulation of Cross Phase Modulation in Intersubband Transition of InGaAs/AlAs/AlAsSb Coupled Quantum Wells Based on Vector Signal Analysis of Electrical Signals. Japanese Journal of Applied Physics, 2008, 47, 8434-8439.	1.6	1
82	Improvement of XPM efficiency in InGaAs/AlAsSb coupled quantum wells using InAlAs coupling barrier for intersubband transition optical switch. , 2008, , .		1
83	Observation of four-wave mixing signals from an AlAsSb/InGaAs ISBT (Inter Sub-Band Transition) optical waveguide. , 2009, , .		1
84	All-optical wavelength conversion at 40Gb/s with enhanced XPM by facet reflection using intersubband transition in InGaAs/AlAsSb quantum well waveguide. , 2010, , .		1
85	Monolithically Integrated Ultrafast All-Optical Switch consisting of Intersubband Optical Nonlinear Waveguide and Michelson Interferometer. , 2011, , .		1
86	Bandgap Control for Intersubband Transition in InGaAs/AlAsSb Coupled Double Quantum Wells. IEEE Photonics Technology Letters, 2013, 25, 1474-1477.	2.5	1
87	Continuous-wave operation of green/yellow laser diodes based on BeZnCdSe quantum wells. Proceedings of SPIE, 2013, , .	1.0	1
88	Communication Model Task Pairing in Artificial Swarm Design. IEEE Robotics and Automation Letters, 2018, 3, 3073-3080.	5.2	1
89	Large quantum confinement effect of conduction electrons in ZnSe/BeTe type II heterostructures. Springer Proceedings in Physics, 2001, , 471-472.	0.0	1
90	Ultrafast spin dynamics in diluted magnetic semiconductor quantum wells. Journal of Crystal Growth, 1998, 184-185, 931-935.	1.6	1

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91	CdSe quantum dot formation induced by electron beam irradiation. Japanese Journal of Applied Physics, 2023, 62, 010903.	1.6	1
92	Ultrafast excitonic optical gain induced by giant-Zeeman splitting in Cd <sub>1-x</sub> Mn <sub>x</sub> Te quantum wells. Journal of Luminescence, 2000, 87-89, 868-870.	3.2	0
93	Femtosecond Pump-Probe Spectroscopy of GaAs Crescent Quantum Wires. Japanese Journal of Applied Physics, 2003, 42, 4919-4923.	1.6	0
94	EFFECT OF THE VOIGT MAGNETIC FIELD ON THE EXCITON COMPLEXES IN ZnSe/BeTe TYPE-II SINGLE QUANTUM WELLS. International Journal of Modern Physics B, 2004, 18, 3749-3752.	1.9	0
95	Effects of ZnSe Interlayer on Properties of (CdS/ZnSe)/BeTe Type-II Super-lattices Grown by Molecular Beam Epitaxy. AIP Conference Proceedings, 2005, , .	0.2	0
96	Fabrication and characterization of waveguide for all optical switching device based on intersubband transition in II-VI based quantum well. , 0, , .		0
97	Exciton complexes in ZnSe/BeTe type-II single quantum wells. AIP Conference Proceedings, 2005, , .	0.2	0
98	Ultrafast Intersubband Transition All-optical Switch with Improved Performance in Wide-Gap II-VI Quantum Wells. , 2006, , .		0
99	Ultrafast intersubband optical switches in II&#x2013;VI-based quantum-well waveguide with separate confinement heterostructure. , 2006, , .		0
100	Ultrafast All-Optical Switches using Intersubband Transition in Quantum Wells. , 0, , .		0
101	Broadband and enhanced picosecond cross-phase modulation in InGaAs /AlAsSb quantum well waveguides. , 2008, , .		0
102	Fabrication of all-optical switch based on intersubband transition in InGaAs/AlAsSb quantum wells with DFB structure. , 2008, , .		0
103	All optical demultiplexing from 160 to 40-Gb/s utilizing InGaAs/AlAsSb quantum well intersubband transition switch. , 2008, , .		0
104	Saturation Characteristics Simulation of Intersubband Absorption for [(CdS/ZnSe/BeTe)/(ZnSe/BeTe)] Coupled Quantum Wells. Japanese Journal of Applied Physics, 2008, 47, 2932-2935.	1.6	0
105	High-Index-Contrast Buried-Waveguide for Intersubband Ultrafast All-Optical Switches Fabricated by Wafer Bonding Technology. , 2009, , .		0
106	Extremely long electron spin coherence induced by a trion transition in ZnSe/BeTe type-II quantum wells. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 272-275.	0.8	0
107	All-optical switch based on intersubband transition in quantum wells. , 2009, , .		0
108	Anisotropic exciton and charged exciton dichroic photoluminescence in undoped ZnSe/BeTe type-II quantum wells in magnetic fields. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 1172-1175.	2.8	0

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109	Intersubband absorption generation through silicon ion implantation in undoped InGaAs/AlAsSb coupled double quantum wells towards monolithic integration of intersubband-transition-based all-optical switches. , 2010, , .		0
110	540-nm green room-temperature CW operation of BeZnCdSe single quantum well laser diode. , 2010, , .		0
111	Photoluminescence anomalies of indirect excitons localized at interfaces in CdS/ZnSe MQWs in very high magnetic fields. Journal of Physics: Conference Series, 2011, 334, 012053.	0.4	0
112	Photo induced cyclotron resonance in ZnSe/BeTe type-II quantum wells. Journal of Physics: Conference Series, 2011, 334, 012054.	0.4	0
113	Propagation of FWM interacting waves in InGaAs/AlAsSb ISBT optical waveguide for wavelength convertor. , 2011, , .		0
114	Theoretical analysis of FWM by ISBT in InGaAs/AlAsSb QWs for wavelength conversion. , 2011, , .		0
115	All-optical Wavelength Conversion of 21.4-Gb/s QPSK Signals using Intersubband Transition in InGaAs/AlAsSb Coupled Double Quantum Wells. , 2012, , .		0
116	Thermal annealing effects on the properties of intersubband absorption in CdS/ZnSe and (CdS/ZnSe)/BeTe II-VI quantum wells. , 2013, , .		0
117	Progress of Be-based II-VI green to yellow laser diodes. , 2013, , .		0
118	Three-Dimensional Silicon Nitride Platform for Resonant Filters. , 2016, , .		0
119	Low insertion loss polarizing beam splitter with asymmetric silicon slot waveguide. , 2016, , .		0
120	Silicon nitride grating waveguide based directional coupler. Proceedings of SPIE, 2016, , .	1.0	0
121	Room-temperature continuous-wave operation of BeZnCdSe quantum-well green-to-yellow laser diodes with sub-10 mA threshold current. Proceedings of SPIE, 2016, , .	1.0	0
122	XPM-based Wavelength Conversion at 80 Gb/s using Intersubband Transition in InGaAs/AlGaAs/AlAsSb Coupled Double Quantum Wells. , 2009, , .		0
123	An 88 fs Fiber Soliton Laser at 1.56 $\mu$ m using a Quantum Well Saturable Absorber with an Ultrafast Intersubband Transition. , 2010, , .		0
124	Monolithically Integrated Intersubband All-Optical Switch using Area-Selective Activation of Cross-Phase Modulation in InGaAs/AlAsSb Quantum Wells. , 2012, , .		0
125	Dynamic Optical Path Switching of 172-Gbit/s OTDM Ultra-High Definition Video Signals Using Fast Channel- Identifiable Clock Recovery and Integratable Devices. , 2012, , .		0
126	Intersubband All-Optical Switch with Bandgap Control of InGaAs/AlAsSb Quantum Wells. , 2013, , .		0



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127	Optical Control of Precession of Mn <sup>2+</sup> Moment in CdTe/Cd <sub>1-x</sub> MnxTe Quantum Wells. Springer Series in Chemical Physics, 1998, , 218-220.	0.0	0
128	Ultrafast Functional Materials for Femtosecond Optoelectronics. Springer Series in Photonics, 1999, , 328-349.	0.0	0