

Optics Classification and Indexing Scheme (OCIS)

The Optics Classification and Indexing Scheme (OCIS) provides a flexible, comprehensive classification system for all optical author input and user retrieval needs. OCIS has a two-level hierarchical structure containing 36 main headers and approximately 1100 subcategories. OSA authors, presenters, and reviewers use OCIS to classify and index journal articles, meeting abstracts and presentations, and areas of research interest and expertise.

Suggestions for changes or additions can be sent to OCIS@osa.org.

Main Categories

000.0000	General	110.0110	Imaging systems	230.0230	Optical devices
010.0010	Atmospheric and oceanic optics	120.0120	Instrumentation, measurement, and metrology	240.0240	Optics at surfaces
020.0020	Atomic and molecular physics	130.0130	Integrated optics	250.0250	Optoelectronics
030.0030	Coherence and statistical optics	140.0140	Lasers and laser optics	260.0260	Physical optics
040.0040	Detectors	150.0150	Machine vision	270.0270	Quantum optics
050.0050	Diffraction and gratings	160.0160	Materials	280.0280	Remote sensing and sensors
060.0060	Fiber optics and optical communications	170.0170	Medical optics and biotechnology	290.0290	Scattering
070.0070	Fourier optics and signal processing	180.0180	Microscopy	300.0300	Spectroscopy
080.0080	Geometric optics	190.0190	Nonlinear optics	310.0310	Thin films
090.0090	Holography	200.0200	Optics in computing	320.0320	Ultrafast optics
100.0100	Image processing	210.0210	Optical data storage	330.0330	Vision, color, and visual optics
		220.0220	Optical design and fabrication	340.0340	X-ray optics
				350.0350	Other areas of optics

Complete Listing

000.0000	General	010.1290	Atmospheric optics	030.1670	Coherent optical effects
000.1200	Announcements, awards, news, and organizational activities	010.1300	Atmospheric propagation	030.4070	Modes
000.1410	Biography	010.1310	Atmospheric scattering	030.4280	Noise in imaging systems
000.1430	Biology and medicine	010.1320	Atmospheric transmittance	030.5260	Photon counting
000.1570	Chemistry	010.1330	Atmospheric turbulence	030.5290	Photon statistics
000.1600	Classical and quantum physics	010.1350	Backscattering	030.5620	Radiative transfer
000.1780	Conferences, lectures, and institutes	010.1615	Clouds	030.5630	Radiometry
000.2060	Education	010.1690	Color	030.5770	Roughness
000.2170	Equipment and techniques	010.2940	Ice crystal phenomena	030.6140	Speckle
000.2190	Experimental physics	010.3310	Laser beam transmission	030.6600	Statistical optics
000.2658	Fundamental tests	010.3640	Lidar	030.6610	Stellar speckle interferometry
000.2690	General physics	010.3920	Meteorology	030.7060	Turbulence
000.2700	General science	010.4030	Mirages and refraction		
000.2780	Gravity	010.4450	Oceanic optics	040.0040	Detectors
000.2850	History and philosophy	010.4455	Oceanic propagation	040.1240	Arrays
000.3110	Instruments, apparatus, and components common to the sciences	010.4458	Oceanic scattering	040.1345	Avalanche photodiodes (APDs)
000.3860	Mathematical methods in physics	010.4950	Ozone	040.1490	Cameras
000.3870	Mathematics	010.5620	Radiative transfer	040.1520	CCD, charge-coupled device
000.4430	Numerical approximation and analysis	010.5630	Radiometry	040.1880	Detection
000.4895	OSA history	010.7030	Troposphere	040.2235	Far infrared or terahertz
000.4920	Other life sciences	010.7060	Turbulence	040.2480	FLIR, forward-looking infrared
000.4930	Other topics of general interest	010.7295	Visibility and imaging	040.2840	Heterodyne
000.5360	Physics literature and publications	010.7340	Water	040.3060	Infrared
000.5490	Probability theory, stochastic processes, and statistics	010.7350	Wave-front sensing	040.3780	Low light level
000.5920	Science and society	020.0020	Atomic and Molecular Physics	040.4200	Multiple quantum well
000.6590	Statistical mechanics	020.1335	Atom optics	040.5150	Photoconductivity
000.6800	Theoretical physics	020.1475	Bose-Einstein condensates	040.5160	Photodetectors
000.6850	Thermodynamics	020.1670	Coherent optical effects	040.5190	Photographic film
010.0010	Atmospheric and oceanic optics	020.2070	Effects of collisions	040.5250	Photomultipliers
010.0280	Remote sensing and sensors	020.2649	Strong field laser physics	040.5350	Photovoltaic
010.1030	Absorption	020.2930	Hyperfine structure	040.5570	Quantum detectors
010.1080	Active or adaptive optics	020.3260	Isotope shifts	040.6040	Silicon
010.1100	Aerosol detection	020.3320	Laser cooling	040.6070	Solid state detectors
010.1110	Aerosols	020.3690	Line shapes and shifts	040.6808	Thermal (uncooled) IR detectors, arrays and imaging
010.1120	Air pollution monitoring	020.4180	Multiphoton processes	040.7190	Ultraviolet
010.1280	Atmospheric composition	020.4900	Oscillator strengths	040.7290	Video
010.1285	Atmospheric correction	020.5580	Quantum electrodynamics	040.7480	X-rays, soft x-rays, extreme ultraviolet (EUV)
		020.5780	Rydberg states		
		020.6580	Stark effect	050.0050	Diffraction and gratings
		020.7010	Laser trapping	050.1220	Apertures
		020.7490	Zeeman effect	050.1380	Binary optics
		030.0030	Coherence and statistical optics	050.1590	Chirping
		030.1640	Coherence		

050.1755	Computational electromagnetic methods	060.4265	Networks, wavelength routing	080.4228	Nonspherical mirror surfaces
050.1930	Dichroism	060.4370	Nonlinear optics, fibers	080.4295	Nonimaging optical systems
050.1940	Diffraction	060.4510	Optical communications	080.4298	Nonimaging optics
050.1950	Diffraction gratings	060.4785	Optical security and encryption	080.4865	Optical vortices
050.1960	Diffraction theory	060.5060	Phase modulation	080.5084	Phase space methods of analysis
050.1965	Diffraction lenses	060.5295	Photonic crystal fibers	080.5692	Ray trajectories in inhomogeneous media
050.1970	Diffraction optics	060.5530	Pulse propagation and temporal solitons	080.6755	Systems with special symmetry
050.2065	Effective medium theory	060.5565	Quantum communications	080.7343	Wave dressing of rays
050.2230	Fabry-Perot	060.5625	Radio frequency photonics		
050.2555	Form birefringence	060.6718	Switching, circuit	090.0090 Holography	
050.2770	Gratings	060.6719	Switching, packet	090.1000	Aberration compensation
050.4865	Optical vortices	060.7140	Ultrafast processes in fibers	090.1705	Color holography
050.5080	Phase shift			090.1760	Computer holography
050.5082	Phase space in wave options	070.0070 Fourier optics and signal processing		090.1970	Diffraction optics
050.5298	Photonic crystals	070.1060	Acousto-optical signal processing	090.1995	Digital holography
050.5745	Resonance domain	070.1170	Analog optical signal processing	090.2645	Stratified volume holograms
050.6624	Subwavelength structures	070.1675	Coherent states (in wave optics)	090.2820	Heads-up displays
050.6875	Three-dimensional fabrication	070.2025	Discrete optical signal processing	090.2870	Holographic display
050.7330	Volume gratings	070.2465	Finite analogs of Fourier transforms	090.2880	Holographic interferometry
		070.2575	Fractional Fourier transforms	090.2890	Holographic optical elements
060.0060 Fiber optics and optical communications		070.2580	Paraxial wave optics	090.2900	Optical storage materials
060.1155	All-optical networks	070.2590	ABCD transforms	090.2910	Holography, microwave
060.1660	Coherent communications	070.2615	Frequency filtering	090.4220	Multiplex holography
060.1810	Buffers, couplers, routers, switches, and multiplexers	070.3185	Invariant optical fields	090.5640	Rainbow holography
060.2270	Fiber characterization	070.4340	Nonlinear optical signal processing	090.5694	Real-time holography
060.2280	Fiber design and fabrication			090.6186	Spectral holography
060.2290	Fiber materials	070.4550	Correlators	090.7330	Volume gratings
060.2300	Fiber measurements	070.4560	Data processing by optical means		
060.2310	Fiber optics	070.4690	Morphological transformations	100.0100 Image processing	
060.2320	Fiber optics amplifiers and oscillators	070.4790	Spectrum analysis	100.0118	Imaging ultrafast phenomena
060.2330	Fiber optics communications	070.5010	Pattern recognition	100.1160	Analog optical image processing
060.2340	Fiber optics components	070.5040	Phase conjugation	100.1390	Binary phase-only filters
060.2350	Fiber optics imaging	070.5753	Resonators	100.1455	Blind deconvolution
060.2360	Fiber optics links and subsystems	070.6020	Continuous optical signal processing	100.1830	Deconvolution
060.2370	Fiber optics sensors			100.1930	Dichroism
060.2380	Fiber optics sources and detectors	070.6110	Spatial filtering	100.2000	Digital image processing
060.2390	Fiber optics, infrared	070.6120	Spatial light modulators	100.2550	Focal-plane-array image processors
060.2400	Fiber properties	070.6760	Talbot and self-imaging effects	100.2650	Fringe analysis
060.2410	Fibers, erbium	070.7145	Ultrafast processing	100.2810	Halftone image reproduction
060.2420	Fibers, polarization-maintaining	070.7345	Wave propagation	100.2960	Image analysis
060.2430	Fibers, single-mode	070.7425	Quasi-probability distribution functions	100.2980	Image enhancement
060.2605	Free-space optical communication			100.3005	Image recognition devices
060.2630	Frequency modulation	080.0080 Geometric optics		100.3008	Image recognition, algorithms and filters
060.2800	Gyroscopes	080.1005	Aberration expansions	100.3010	Image reconstruction techniques
060.2840	Heterodyne	080.1010	Aberrations (global)	100.3020	Image reconstruction-restoration
060.2920	Homodyning	080.1235	Apparent images	100.3175	Interferometric imaging
060.3510	Lasers, fiber	080.1238	Array waveguide devices	100.3190	Inverse problems
060.3735	Fiber Bragg gratings	080.1510	Propagation methods	100.3200	Inverse scattering
060.3738	Fiber Bragg gratings, photosensitivity	080.1665	Coherent design	100.4145	Motion, hyperspectral image processing
060.4005	Microstructured fibers	080.1753	Computation methods	100.4550	Correlators
060.4080	Modulation	080.2175	Etendue	100.4992	Pattern, nonlinear correlators
060.4230	Multiplexing	080.2203	Fabrication, electroforming	100.4993	Pattern recognition, Bayesian processors
060.4250	Networks	080.2205	Fabrication, injection molding	100.4994	Pattern recognition, image transforms
060.4251	Networks, assignment and routing algorithms	080.2208	Fabrication, tolerancing	100.4995	Pattern recognition, metrics
060.4252	Networks, broadcast	080.2468	First-order optics	100.4996	Pattern recognition, neural networks
060.4253	Networks, circuit-switched	080.2575	Fractional Fourier transforms	100.4997	Pattern recognition, nonlinear spatial filters
060.4254	Networks, combinatorial network design	080.2710	Inhomogeneous optical media	100.4998	Pattern recognition, optical security and encryption
060.4255	Networks, multicast	080.2720	Mathematical methods (general)	100.4999	Pattern recognition, target tracking
060.4256	Networks, network optimization	080.2730	Matrix methods in paraxial optics		
060.4257	Networks, network survivability	080.2740	Geometric optical design	100.5010	Pattern recognition
060.4258	Networks, network topology	080.3095	Inhomogeneous elements in optical systems	100.5070	Phase retrieval
060.4259	Networks, packet-switched	080.3620	Lens system design	100.5088	Phase unwrapping
060.4261	Networks, protection and restoration	080.3630	Lenses	100.5090	Phase-only filters
060.4262	Networks, ring	080.3645	Lie algebraic and group methods	100.5760	Rotation-invariant pattern recognition
060.4263	Networks, star	080.3685	Lightpipes		
060.4264	Networks, wavelength assignment	080.3875	Matrix methods in metaxial expansions		
		080.4035	Mirror system design		
		080.4225	Nonspherical lens design		

100.6640	Superresolution	120.1680	Collimation	130.4110	Modulators
100.6740	Synthetic discrimination functions	120.1740	Combustion diagnostics	130.4310	Nonlinear
100.6890	Three-dimensional image processing	120.1840	Densitometers, reflectometers	130.4815	Optical switching devices
100.6950	Tomographic image processing	120.1880	Detection	130.5296	Photonic crystal waveguides
100.7410	Wavelets	120.2040	Displays	130.5440	Polarization-selective devices
		120.2130	Ellipsometry and polarimetry	130.5460	Polymer waveguides
		120.2230	Fabry-Perot	130.5990	Semiconductors
110.0110	Imaging systems	120.2440	Filters	130.6010	Sensors
110.0113	Imaging through turbid media	120.2650	Fringe analysis	130.6622	Subsystem integration and techniques
110.0115	Imaging through turbulent media	120.2820	Heads-up displays	130.6750	Systems
110.0180	Microscopy	120.2830	Height measurements	130.7405	Wavelength conversion devices
110.1080	Active or adaptive optics	120.2880	Holographic interferometry	130.7408	Wavelength filtering devices
110.1085	Adaptive imaging	120.2920	Homodyning		
110.1220	Apertures	120.3150	Integrating spheres		
110.1455	Blind deconvolution	120.3180	Interferometry	140.0140	Lasers and laser optics
110.1650	Coherence imaging	120.3620	Lens system design	140.1340	Atomic gas lasers
110.1758	Computational imaging	120.3688	Lightwave analyzers	140.1540	Chaos
110.2350	Fiber optics imaging	120.3890	Medical optics instrumentation	140.1550	Chemical lasers
110.2650	Fringe analysis	120.3930	Metrological instrumentation	140.1700	Color center lasers
110.2760	Gradient-index lenses	120.3940	Metrology	140.2010	Diode laser arrays
110.2945	Illumination design	120.4120	Moire' techniques	140.2020	Diode lasers
110.2960	Image analysis	120.4140	Monochromators	140.2050	Dye lasers
110.2970	Image detection systems	120.4290	Nondestructive testing	140.2180	Excimer lasers
110.2990	Image formation theory	120.4530	Optical constants	140.2600	Free-electron lasers (FELs)
110.3000	Image quality assessment	120.4570	Optical design of instruments	140.3070	Infrared and far-infrared lasers
110.3010	Image reconstruction techniques	120.4610	Optical fabrication	140.3210	Ion lasers
110.3055	Information theoretical analysis	120.4630	Optical inspection	140.3280	Laser amplifiers
110.3080	Infrared imaging	120.4640	Optical instruments	140.3290	Laser arrays
110.3175	Interferometric imaging	120.4800	Optical standards and testing	140.3295	Laser beam characterization
110.3200	Inverse scattering	120.4820	Optical systems	140.3298	Laser beam combining
110.3925	Metrics	120.4825	Optical time domain reflectometry	140.3300	Laser beam shaping
110.3960	Microlithography	120.4880	Optomechanics	140.3320	Laser cooling
110.4100	Modulation transfer function	120.5050	Phase measurement	140.3325	Laser coupling
110.4153	Motion estimation and optical flow	120.5060	Phase modulation	140.3330	Laser damage
110.4155	Multiframe image processing	120.5240	Photometry	140.3360	Laser safety and eye protection
110.4190	Multiple imaging	120.5410	Polarimetry	140.3370	Laser gyroscopes
110.4234	Multispectral and hyperspectral imaging	120.5475	Pressure measurement	140.3380	Laser materials
110.4235	Nanolithography	120.5630	Radiometry	140.3390	Laser materials processing
110.4248	Networked imaging	120.5700	Reflection	140.3410	Laser resonators
110.4280	Noise in imaging systems	120.5710	Refraction	140.3425	Laser stabilization
110.4500	Optical coherence tomography	120.5790	Sagnac effect	140.3430	Laser theory
110.4850	Optical transfer functions	120.5800	Scanners	140.3440	Laser-induced breakdown
110.4980	Partial coherence in imaging	120.5820	Scattering measurements	140.3450	Laser-induced chemistry
110.5086	Phase unwrapping	120.6085	Space instrumentation	140.3460	Lasers
110.5100	Phased-array imaging systems	120.6150	Speckle imaging	140.3470	Lasers, carbon dioxide
110.5120	Photoacoustic imaging	120.6160	Speckle interferometry	140.3480	Lasers, diode-pumped
110.5125	Photoacoustics	120.6165	Speckle interferometry, metrology	140.3490	Lasers, distributed-feedback
110.5200	Photography	120.6168	Speckle interferometry, stellar	140.3500	Lasers, erbium
110.5220	Photolithography	120.6200	Spectrometers and spectroscopic instrumentation	140.3510	Lasers, fiber
110.5405	Polarimetric imaging	120.6650	Surface measurements, figure	140.3515	Lasers, frequency doubled
110.6150	Speckle imaging	120.6660	Surface measurements, roughness	140.3518	Lasers, frequency modulated
110.6760	Talbot and self-imaging effects	120.6710	Susceptibility	140.3520	Lasers, injection-locked
110.6770	Telescopes	120.6780	Temperature	140.3530	Lasers, neodymium
110.6795	Terahertz imaging	120.6810	Thermal effects	140.3535	Lasers, phase conjugate
110.6820	Thermal imaging	120.7000	Transmission	140.3538	Lasers, pulsed
110.6880	Three-dimensional image acquisition	120.7250	Velocimetry	140.3540	Lasers, Q-switched
110.6895	Three-dimensional lithography	120.7280	Vibration analysis	140.3550	Lasers, Raman
110.6915	Time imaging			140.3560	Lasers, ring
110.6955	Tomographic imaging	130.0130	Integrated optics	140.3570	Lasers, single-mode
110.6960	Tomography	130.0250	Optoelectronics	140.3580	Lasers, solid-state
110.6980	Transforms	130.1750	Components	140.3590	Lasers, titanium
110.7050	Turbid media	130.2035	Dispersion compensation devices	140.3600	Lasers, tunable
110.7170	Ultrasound	130.2260	Ferroelectrics	140.3610	Lasers, ultraviolet
110.7348	Wavefront encoding	130.2755	Glass waveguides	140.3613	Lasers, upconversion
110.7410	Wavelets	130.2790	Guided waves	140.3615	Lasers, ytterbium
110.7440	X-ray imaging	130.3060	Infrared	140.3945	Microcavities
		130.3120	Integrated optics devices	140.3948	Microcavity devices
120.0120	Instrumentation, measurement, and metrology	130.3130	Integrated optics materials	140.4050	Mode-locked lasers
120.0280	Remote sensing and sensors	130.3730	Lithium niobate	140.4130	Molecular gas lasers
120.1088	Adaptive interferometry	130.3750	Optical logic devices	140.4480	Optical amplifiers
		130.3990	Micro-optical devices	140.4780	Optical resonators
				140.5560	Pumping
				140.5680	Rare earth and transition metal solid-state lasers

140.5960	Semiconductor lasers	160.6840	Thermo-optical materials	180.2520	Fluorescence microscopy
140.5965	Semiconductor lasers, quantum cascade	160.6990	Transition-metal-doped materials	180.3170	Interference microscopy
140.6630	Superradiance, superfluorescence	170.0170	Medical optics and biotechnology	180.4243	Near-field microscopy
140.6810	Thermal effects	170.0110	Imaging systems	180.4315	Nonlinear microscopy
140.7010	Laser trapping	170.0180	Microscopy	180.5655	Raman microscopy
140.7090	Ultrafast lasers	170.1020	Ablation of tissue	180.5810	Scanning microscopy
140.7215	Undulator radiation	170.1065	Acousto-optics	180.6900	Three-dimensional microscopy
140.7240	UV, EUV, and X-ray lasers	170.1420	Biology	180.7460	X-ray microscopy
140.7260	Vertical cavity surface emitting lasers	170.1460	Blood gas monitoring	190.0190	Nonlinear optics
140.7270	Vertical emitting lasers	170.1470	Blood or tissue constituent monitoring	190.1450	Bistability
140.7300	Visible lasers	170.1530	Cell analysis	190.1900	Diagnostic applications of nonlinear optics
150.0150	Machine vision	170.1580	Chemometrics	190.2055	Dynamic gratings
150.0155	Machine vision optics	170.1610	Clinical applications	190.2620	Harmonic generation and mixing
150.1135	Algorithms	170.1630	Coded aperture imaging	190.2640	Stimulated scattering, modulation, etc.
150.1488	Calibration	170.1650	Coherence imaging	190.3100	Instabilities and chaos
150.1708	Color inspection	170.1790	Confocal microscopy	190.3270	Kerr effect
150.1835	Defect understanding	170.1850	Dentistry	190.3970	Microparticle nonlinear optics
150.2945	Illumination design	170.1870	Dermatology	190.4160	Multiharmonic generation
150.2950	Illumination	170.2150	Endoscopic imaging	190.4180	Multiphoton processes
150.3040	Industrial inspection	170.2520	Fluorescence microscopy	190.4223	Nonlinear wave mixing
150.3045	Industrial optical metrology	170.2655	Functional monitoring and imaging	190.4350	Nonlinear optics at surfaces
150.4065	Vision processor architecture	170.2670	Gamma ray imaging	190.4360	Nonlinear optics, devices
150.4232	Multisensor methods	170.2680	Gastrointestinal	190.4370	Nonlinear optics, fibers
150.4620	Optical flow	170.2945	Illumination design	190.4380	Nonlinear optics, four-wave mixing
150.5495	Process monitoring and control	170.3010	Image reconstruction techniques	190.4390	Nonlinear optics, integrated optics
150.5670	Range finding	170.3340	Laser Doppler velocimetry	190.4400	Nonlinear optics, materials
150.5758	Robotic and machine control	170.3650	Lifetime-based sensing	190.4410	Nonlinear optics, parametric processes
150.6044	Smart cameras	170.3660	Light propagation in tissues	190.4420	Nonlinear optics, transverse effects in
150.6910	Three-dimensional sensing	170.3830	Mammography	190.4710	Optical nonlinearities in organic materials
160.0160	Materials	170.3880	Medical and biological imaging	190.4720	Optical nonlinearities of condensed matter
160.1050	Acousto-optical materials	170.3890	Medical optics instrumentation	190.4870	Photothermal effects
160.1190	Anisotropic optical materials	170.4090	Modulation techniques	190.4970	Parametric oscillators and amplifiers
160.1245	Artificially engineered materials	170.4440	ObGyn	190.4975	Parametric processes
160.1435	Biomaterials	170.4460	Ophthalmic optics and devices	190.5040	Phase conjugation
160.1585	Chiral media	170.4470	Ophthalmology	190.5330	Photorefractive optics
160.1890	Detector materials	170.4500	Optical coherence tomography	190.5530	Pulse propagation and temporal solitons
160.2100	Electro-optical materials	170.4520	Optical confinement and manipulation	190.5650	Raman effect
160.2120	Elements	170.4580	Optical diagnostics for medicine	190.5890	Scattering, stimulated
160.2220	Defect-center materials	170.4730	Optical pathology	190.5940	Self-action effects
160.2260	Ferroelectrics	170.4940	Otolaryngology	190.5970	Semiconductor nonlinear optics including MQW
160.2290	Fiber materials	170.5120	Photoacoustic imaging	190.6135	Spatial solitons
160.2540	Fluorescent and luminescent materials	170.5180	Photodynamic therapy	190.7070	Two-wave mixing
160.2710	Inhomogeneous optical media	170.5270	Photon density waves	190.7110	Ultrafast nonlinear optics
160.2750	Glass and other amorphous materials	170.5280	Photon migration	190.7220	Upconversion
160.2900	Optical storage materials	170.5380	Physiology	200.0200	Optics in computing
160.3130	Integrated optics materials	170.5660	Raman spectroscopy	200.1130	Algebraic optical processing
160.3220	Ionic crystals	170.5755	Retina scanning	200.2605	Free-space optical communication
160.3380	Laser materials	170.5810	Scanning microscopy	200.2610	Free-space digital optics
160.3710	Liquid crystals	170.6280	Spectroscopy, fluorescence and luminescence	200.3050	Information processing
160.3730	Lithium niobate	170.6480	Spectroscopy, speckle	200.3760	Logic-based optical processing
160.3820	Magneto-optical materials	170.6510	Spectroscopy, tissue diagnostics	200.4260	Neural networks
160.3900	Metals	170.6795	Terahertz imaging	200.4490	Optical buffers
160.3918	Metamaterials	170.6900	Three-dimensional microscopy	200.4540	Optical content addressable memory processors
160.4236	Nanomaterials	170.6920	Time-resolved imaging	200.4560	Optical data processing
160.4330	Nonlinear optical materials	170.6930	Tissue	200.4650	Optical interconnects
160.4670	Optical materials	170.6935	Tissue characterization	200.4660	Optical logic
160.4760	Optical properties	170.6940	Tissue welding	200.4690	Morphological transformations
160.4890	Organic materials	170.6960	Tomography	200.4700	Optical neural systems
160.5140	Photoconductive materials	170.7050	Turbid media	200.4740	Optical processing
160.5293	Photonic bandgap materials	170.7160	Ultrafast technology	200.4860	Optical vector-matrix systems
160.5298	Photonic crystals	170.7170	Ultrasound	200.4880	Optomechanics
160.5320	Photorefractive materials	170.7180	Ultrasound diagnostics		
160.5335	Photosensitive materials	170.7230	Urology		
160.5470	Polymers	170.7440	X-ray imaging		
160.5690	Rare-earth-doped materials	180.0180	Microscopy		
160.6000	Semiconductor materials	180.1655	Coherence tomography		
160.6030	Silica	180.1790	Confocal microscopy		
160.6060	Solgel				

200.4960	Parallel processing	230.4685	Optical microelectromechanical devices	250.7260	Vertical cavity surface emitting lasers
200.6015	Signal regeneration	230.4910	Oscillators	250.7270	Vertical emitting lasers
200.6046	Smart pixel systems	230.5160	Photodetectors	250.7360	Waveguide modulators
200.6715	Switching	230.5170	Photodiodes		
210.0210	Optical data storage	230.5298	Photonic crystals	260.0260	Physical optics
210.1635	Coding for optical storage	230.5440	Polarization-selective devices	260.1180	Crystal optics
210.2860	Holographic and volume memories	230.5480	Prisms	260.1440	Birefringence
210.3810	Magneto-optic systems	230.5590	Quantum-well, -wire and -dot devices	260.1560	Chemiluminescence
210.3820	Magneto-optical materials	230.5750	Resonators	260.1960	Diffraction theory
210.4245	Near-field optical recording	230.6046	Smart pixel systems	260.2030	Dispersion
210.4590	Optical disks	230.6080	Sources	260.2065	Effective medium theory
210.4680	Optical memories	230.6120	Spatial light modulators	260.2110	Electromagnetic optics
210.4770	Optical recording	230.7020	Traveling-wave devices	260.2130	Ellipsometry and polarimetry
210.4810	Optical storage-recording materials	230.7370	Waveguides	260.2160	Energy transfer
210.4965	Parallel readout	230.7380	Waveguides, channeled	260.2510	Fluorescence
		230.7390	Waveguides, planar	260.2710	Inhomogeneous optical media
		230.7400	Waveguides, slab	260.3060	Infrared
220.0220	Optical design and fabrication	230.7405	Wavelength conversion devices	260.3090	Infrared, far
220.1000	Aberration compensation	230.7408	Wavelength filtering devices	260.3160	Interference
220.1010	Aberrations (global)	240.0240	Optics at surfaces	260.3230	Ionization
220.1080	Active or adaptive optics	240.0310	Thin films	260.3800	Luminescence
220.1140	Alignment	240.1485	Buried interfaces	260.3910	Metal optics
220.1230	Apodization	240.2130	Ellipsometry and polarimetry	260.5130	Photochemistry
220.1250	Aspherics	240.3695	Linear and nonlinear light scattering from surfaces	260.5150	Photoconductivity
220.1770	Concentrators	240.3990	Micro-optical devices	260.5210	Photoionization
220.1920	Diamond machining	240.4350	Nonlinear optics at surfaces	260.5430	Polarization
220.2560	Propagating methods	240.5420	Polaritons	260.5740	Resonance
220.2740	Geometric optical design	240.5445	Polarization-selective devices	260.5950	Self-focusing
220.2945	Illumination design	240.5450	Polishing	260.6042	Singular optics
220.3620	Lens system design	240.5698	Reflectance anisotropy spectroscopy	260.6048	Soft x-rays
220.3630	Lenses	240.5770	Roughness	260.6580	Stark effect
220.3740	Lithography	240.6380	Spectroscopy, modulation	260.6970	Total internal reflection
220.4000	Microstructure fabrication	240.6490	Spectroscopy, surface	260.7120	Ultrafast phenomena
220.4241	Nanostructure fabrication	240.6645	Surface differential reflectance	260.7190	Ultraviolet
220.4298	Nonimaging optics	240.6648	Surface dynamics	260.7200	Ultraviolet, extreme
220.4610	Optical fabrication	240.6670	Surface photochemistry	260.7210	Ultraviolet, vacuum
220.4830	Systems design	240.6675	Surface photoemission and photoelectron spectroscopy	260.7490	Zeeman effect
220.4840	Testing	240.6680	Surface plasmons	270.0270	Quantum optics
220.4880	Optomechanics	240.6690	Surface waves	270.1670	Coherent optical effects
220.5450	Polishing	240.6695	Surface-enhanced Raman scattering	270.2500	Fluctuations, relaxations, and noise
230.0230	Optical devices	240.6700	Surfaces	270.3100	Instabilities and chaos
230.0040	Detectors	240.7040	Tunneling	270.3430	Laser theory
230.0250	Optoelectronics	250.0250	Optoelectronics	270.4180	Multiphoton processes
230.1040	Acousto-optical devices	250.0040	Detectors	270.5290	Photon statistics
230.1150	All-optical devices	250.1345	Avalanche photodiodes (APDs)	270.5530	Pulse propagation and temporal solitons
230.1360	Beam splitters	250.1500	Cathodoluminescence	270.5565	Quantum communications
230.1480	Bragg reflectors	250.2080	Polymer active devices	270.5568	Quantum cryptography
230.1950	Diffraction gratings	250.3140	Integrated optoelectronic circuits	270.5570	Quantum detectors
230.1980	Diffusers	250.3680	Light-emitting polymers	270.5580	Quantum electrodynamics
230.2035	Dispersion compensation devices	250.3750	Optical logic devices	270.5585	Quantum information and processing
230.2090	Electro-optical devices	250.4110	Modulators	270.6570	Squeezed states
230.2240	Faraday effect	250.4390	Nonlinear optics, integrated optics	270.6620	Strong-field processes
230.2285	Fiber devices and optical amplifiers	250.4480	Optical amplifiers	270.6630	Superradiance, superfluorescence
230.3120	Integrated optics devices	250.4745	Optical processing devices	280.0280	Remote sensing and sensors
230.3205	Invisibility cloaks	250.5230	Photoluminescence	280.1100	Aerosol detection
230.3240	Isolators	250.5300	Photonic integrated circuits	280.1120	Air pollution monitoring
230.3670	Light-emitting diodes	250.5403	Plasmonics	280.1310	Atmospheric scattering
230.3720	Liquid-crystal devices	250.5460	Polymer waveguides	280.1350	Backscattering
230.3750	Optical logic devices	250.5530	Pulse propagation and temporal solitons	280.1355	Bathymetry
230.3810	Magneto-optic systems	250.5590	Quantum-well, -wire and -dot devices	280.1415	Biological sensing and sensors
230.3990	Micro-optical devices	250.5960	Semiconductor lasers	280.1545	Chemical analysis
230.4000	Microstructure fabrication	250.5980	Semiconductor optical amplifiers	280.1740	Combustion diagnostics
230.4040	Mirrors	250.6715	Switching	280.1910	DIAL, differential absorption lidar
230.4110	Modulators			280.2470	Flames
230.4170	Multilayers			280.2490	Flow diagnostics
230.4205	Multiple quantum well (MQW) modulators			280.3340	Laser Doppler velocimetry
230.4320	Nonlinear optical devices			280.3375	Laser induced ultrasonics
230.4480	Optical amplifiers				
230.4555	Coupled resonators				

280.3400	Laser range finder	300.6310	Spectroscopy, heterodyne	320.7130	Ultrafast processes in condensed matter, including semiconductors
280.3420	Laser sensors	300.6320	Spectroscopy, high-resolution	320.7140	Ultrafast processes in fibers
280.3640	Lidar	300.6330	Spectroscopy, inelastic scattering including Raman	320.7150	Ultrafast spectroscopy
280.4750	Optical processing of radar images	300.6340	Spectroscopy, infrared	320.7160	Ultrafast technology
280.4788	Optical sensing and sensors	300.6350	Spectroscopy, ionization		
280.4991	Passive remote sensing	300.6360	Spectroscopy, laser	330.0330	Vision, color, and visual optics
280.5110	Phased-array radar	300.6365	Spectroscopy, laser induced breakdown	330.1070	Vision - acuity
280.5395	Plasma diagnostics	300.6370	Spectroscopy, microwave	330.1400	Vision - binocular and stereopsis
280.5475	Pressure measurement	300.6380	Spectroscopy, modulation	330.1690	Color
280.5600	Radar	300.6390	Spectroscopy, molecular	330.1710	Color, measurement
280.5715	Refractivity profiles	300.6400	Spectroscopy, optogalvanic	330.1715	Color, rendering and metamerism
280.6730	Synthetic aperture radar	300.6410	Spectroscopy, multiphoton	330.1720	Color vision
280.6780	Temperature	300.6420	Spectroscopy, nonlinear	330.1730	Colorimetry
280.7060	Turbulence	300.6430	Spectroscopy, photothermal	330.1800	Vision - contrast sensitivity
280.7250	Velocimetry	300.6440	Spectroscopy, optogalvanic	330.1880	Detection
		300.6450	Spectroscopy, Raman	330.2210	Vision - eye movements
290.0290	Scattering	300.6460	Spectroscopy, saturation	330.3350	Vision - laser damage
290.1090	Aerosol and cloud effects	300.6470	Spectroscopy, semiconductors	330.3790	Low vision
290.1310	Atmospheric scattering	300.6480	Spectroscopy, speckle	330.3795	Low-vision optics
290.1350	Backscattering	300.6490	Spectroscopy, surface	330.4060	Vision modeling
290.1483	BSDF, BRDF, and BTDF	300.6495	Spectroscopy, terahertz	330.4150	Motion detection
290.1990	Diffusion	300.6500	Spectroscopy, time-resolved	330.4270	Vision system neurophysiology
290.2200	Extinction	300.6520	Spectroscopy, trapped ion	330.4300	Vision system - noninvasive assessment
290.2558	Forward scattering	300.6530	Spectroscopy, ultrafast	330.4460	Ophthalmic optics and devices
290.2648	Stray light	300.6540	Spectroscopy, ultraviolet	330.4595	Optical effects on vision
290.2745	Ghost reflections	300.6550	Spectroscopy, visible	330.4875	Optics of physiological systems
290.3030	Index measurements	300.6560	Spectroscopy, x-ray	330.5000	Vision - patterns and recognition
290.3200	Inverse scattering			330.5020	Perception psychology
290.3700	Linewidth	310.0310	Thin films	330.5310	Vision - photoreceptors
290.3770	Long-wave scattering	310.1210	Antireflection coatings	330.5370	Physiological optics
290.4020	Mie theory	310.1515	Protective coatings	330.5380	Physiology
290.4210	Multiple scattering	310.1620	Interference coatings	330.5510	Psychophysics
290.5820	Scattering measurements	310.1860	Deposition and fabrication	330.6100	Spatial discrimination
290.5825	Scattering theory	310.2785	Guided wave applications	330.6110	Spatial filtering
290.5830	Scattering, Brillouin	310.2790	Guided waves	330.6130	Spatial resolution
290.5835	Scattering, Harvey	310.3840	Materials and process characterization	330.6180	Spectral discrimination
290.5838	Scattering, in-field	310.3915	Metallic, opaque, and absorbing coatings	330.6790	Temporal discrimination
290.5839	Scattering, invisibility			330.7310	Vision
290.5840	Scattering, molecules	310.4165	Multilayer design	330.7320	Vision adaptation
290.5845	Scattering, out-of-field	310.4925	Other properties (stress, chemical, etc.)	330.7321	Vision coupled optical systems
290.5850	Scattering, particles	310.5448	Polarization, other optical properties	330.7322	Visual optics, accommodation
290.5855	Scattering, polarization	310.5696	Refinement and synthesis methods	330.7323	Visual optics, aging changes
290.5860	Scattering, Raman	310.6188	Spectral properties	330.7324	Visual optics, comparative animal models
290.5870	Scattering, Rayleigh	310.6628	Subwavelength structures, nanostructures	330.7325	Visual optics, metrology
290.5880	Scattering, rough surfaces	310.6805	Theory and design	330.7326	Visual optics, modeling
290.5890	Scattering, stimulated	310.6845	Thin film devices and applications	330.7327	Visual optics, ophthalmic instrumentation
290.5900	Scattering, stimulated Brillouin	310.6860	Thin films, optical properties	330.7328	Visual optics, ophthalmic appliances
290.5910	Scattering, stimulated Raman	310.6870	Thin films, other properties	330.7329	Visual optics, pathology
290.5930	Scintillation	310.7005	Transparent conductive coatings	330.7331	Visual optics, receptor optics
290.5930	Scintillation			330.7333	Visual optics, refractive anomalies
290.6815	Thermal emission	320.0320	Ultrafast optics	330.7335	Visual optics, refractive surgery
290.7050	Turbid media	320.1590	Chirping	330.7338	Visually coupled optical systems
		320.2250	Femtosecond phenomena	340.0340	X-ray optics
300.0300	Spectroscopy	320.3980	Microsecond phenomena	340.1365	Bending magnet radiation
300.1030	Absorption	320.4240	Nanosecond phenomena	340.6720	Synchrotron radiation
300.2140	Emission	320.5390	Picosecond phenomena	340.7215	Undulator radiation
300.2530	Fluorescence, laser-induced	320.5520	Pulse compression	340.7430	X-ray coded apertures
300.2570	Four-wave mixing	320.5540	Pulse shaping	340.7440	X-ray imaging
300.3700	Linewidth	320.5550	Pulses	340.7450	X-ray interferometry
300.6075	Sonoluminescence	320.5550	Pulses	340.7460	X-ray microscopy
300.6170	Spectra	320.6629	Supercontinuum generation	340.7470	X-ray mirrors
300.6190	Spectrometers	320.7080	Ultrafast devices	340.7480	X-rays, soft x-rays, extreme ultraviolet (EUV)
300.6210	Spectroscopy, atomic	320.7085	Ultrafast information processing		
300.6220	Spectroscopy, beam foil	320.7090	Ultrafast lasers	350.0350	Other areas of optics
300.6230	Spectroscopy, coherent anti-Stokes Raman scattering	320.7100	Ultrafast measurements	350.1260	Astronomical optics
300.6240	Spectroscopy, coherent transient	320.7110	Ultrafast nonlinear optics	350.1270	Astronomy and astrophysics
300.6250	Spectroscopy, condensed matter	320.7120	Ultrafast phenomena		
300.6260	Spectroscopy, diode lasers				
300.6270	Spectroscopy, far infrared				
300.6280	Spectroscopy, fluorescence and luminescence				
300.6290	Spectroscopy, four-wave mixing				
300.6300	Spectroscopy, Fourier transforms				

350.1370	Berry's phase	350.4010	Microwaves	350.5500	Propagation
350.1820	Damage	350.4238	Nanophotonics and photonic crystals	350.5610	Radiation
350.2450	Filters, absorption	350.4600	Optical engineering	350.5720	Relativity
350.2460	Filters, interference	350.4800	Optical standards and testing	350.5730	Resolution
350.2660	Fusion	350.4855	Optical tweezers or optical manipulation	350.6050	Solar energy
350.2770	Gratings	350.4990	Particles	350.6090	Space optics
350.3250	Isotope separation	350.5030	Phase	350.6670	Surface photochemistry
350.3390	Laser materials processing	350.5130	Photochemistry	350.6830	Thermal lensing
350.3450	Laser-induced chemistry	350.5340	Photothermal effects	350.6980	Transforms
350.3618	Left-handed materials	350.5400	Plasmas	350.7420	Waves
350.3850	Materials processing				
350.3950	Micro-optics				