Genaro Saavedra

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Three-dimensional imaging through patterned type-1 microscopy. Optics Express, 2022, 30, 511-521.	3.4	1
2	Handheld and Cost-Effective Fourier Lightfield Microscope. Sensors, 2022, 22, 1459.	3.8	4
3	Fourier lightfield microscopy: a practical design guide. Applied Optics, 2022, 61, 2558.	1.8	10
4	Examining the utility of pinhole-type screens for lightfield display. Optics Express, 2021, 29, 33357.	3.4	1
5	Roadmap on digital holography [Invited]. Optics Express, 2021, 29, 35078.	3.4	133
6	The Lightfield Microscope Eyepiece. Sensors, 2021, 21, 6619.	3.8	4
7	3D imaging through Fourier lightfield microscopy. , 2021, , .		Ο
8	Multiphoton image enhancement with variable squared cubic phase masks. , 2021, , .		0
9	Optical Sectioning Microscopy Through Single-Shot Lightfield Protocol. IEEE Access, 2020, 8, 14944-14952.	4.2	15
10	Robust Light Field Watermarking by 4D Wavelet Transform. IEEE Access, 2020, 8, 203117-203133.	4.2	7
11	What about computational super-resolution in fluorescence Fourier light field microscopy?. Optics Express, 2020, 28, 16554.	3.4	23
12	Three-dimensional real-time darkfield imaging through Fourier lightfield microscopy. Optics Express, 2020, 28, 30513.	3.4	12
13	Fourier-domain lightfield microscopy: a new paradigm in 3D microscopy. , 2020, , .		1
14	Lightfield microscopy, an emerging tool for real-time 3D imaging. , 2020, , .		0
15	Fast and robust phase-shift estimation in two-dimensional structured illumination microscopy. PLoS ONE, 2019, 14, e0221254.	2.5	3
16	Robust Depth Estimation for Light Field Microscopy. Sensors, 2019, 19, 500.	3.8	24
17	GPU-accelerated integral imaging and full-parallax 3D display using stereo–plenoptic camera system. Optics and Lasers in Engineering, 2019, 115, 172-178.	3.8	4
18	Digital holographic microscopy as a screening technology for diabetes. , 2019, , .		0

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19	Toward 3D integral-imaging broadcast with increased viewing angle and parallax. Optics and Lasers in Engineering, 2018, 107, 83-90.	3.8	6
20	Full-parallax 3D display from stereo-hybrid 3D camera system. Optics and Lasers in Engineering, 2018, 103, 46-54.	3.8	10
21	Continuous Refocusing for Integral Microscopy with Fourier Plane Recording. , 2018, , .		0
22	Optical sectioning with a Wiener-like filter in Fourier integral imaging microscopy. Applied Physics Letters, 2018, 113, 214101.	3.3	9
23	Recent Advances in 3D Structured Illumination Microscopy. , 2018, , .		0
24	Recent Advances in Digital Holographic Microscopy. , 2018, , .		1
25	New Method of Microimages Generation for 3D Display. Sensors, 2018, 18, 2805.	3.8	1
26	Large Depth-of-Field Integral Microscopy by Use of a Liquid Lens. Sensors, 2018, 18, 3383.	3.8	9
27	View images with unprecedented resolution in integral microscopy. OSA Continuum, 2018, 1, 40.	1.8	6
28	Optimal design of incoherent tunable-frequency structured illumination microscope scheme. , 2018, , .		1
29	Ownership protection of plenoptic images by robust and reversible watermarking. Optics and Lasers in Engineering, 2018, 107, 325-334.	3.8	17
30	FIMic: design for ultimate 3D-integral microscopy of in-vivo biological samples. Biomedical Optics Express, 2018, 9, 335.	2.9	72
31	Improvement of two-dimensional structured illumination microscopy with an incoherent illumination pattern of tunable frequency. Applied Optics, 2018, 57, B92.	1.8	13
32	Three-dimensional imaging system with both improved lateral resolution and depth of field considering non-uniform system parameters. Applied Optics, 2018, 57, 9423.	1.8	16
33	Multidimensional Integral Imaging and Recognition in Degraded Environments. , 2018, , .		Ο
34	Preprocessing method to correct illumination pattern in sinusoidal-based structured illumination microscopy. , 2018, , .		1
35	3D structured illumination microscopy using an incoherent illumination system based on a Fresnel biprism. , 2018, , .		2
36	Tradeoff between insensitivity to depth-induced spherical aberration and resolution of 3D fluorescence imaging due to the use of wavefront encoding with a radially symmetric phase mask. , 2018, , .		2

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37	Evaluation of the use of wavefront encoding to reduce depth-induced aberration in structured illumination microscopy. , 2018, , .		0
38	Tunable-frequency three-dimensional structured illumination microscopy with reduced data-acquisition. Optics Express, 2018, 26, 30476.	3.4	8
39	Recent Advances in the Capture and Display of Macroscopic and Microscopic 3-D Scenes by Integral Imaging. Proceedings of the IEEE, 2017, 105, 825-836.	21.3	47
40	Plenoptic image watermarking to preserve copyright. , 2017, , .		0
41	Integral display for non-static observers. Proceedings of SPIE, 2017, , .	0.8	0
42	Integral-Imaging display from stereo-Kinect capture. Proceedings of SPIE, 2017, , .	0.8	0
43	Integral imaging with Fourier-plane recording. Proceedings of SPIE, 2017, , .	0.8	Ο
44	Multidimensional Optical Sensing and Imaging System (MOSIS): From Macroscales to Microscales. Proceedings of the IEEE, 2017, 105, 850-875.	21.3	35
45	Comparison of 3D structured patterns with tunable frequency for use in structured illumination microscopy. , 2017, , .		5
46	Implementation of an incoherent 3D patterned illumination design in a structured illumination microscope. Proceedings of SPIE, 2017, , .	0.8	0
47	Comparison of two structured illumination techniques based on different 3D illumination patterns. , 2017, , .		2
48	Experimental validation of a customized phase mask designed to enable efficient computational optical sectioning microscopy through wavefront encoding. Applied Optics, 2017, 56, D14.	2.1	14
49	Resolution improvements in integral microscopy with Fourier plane recording. Optics Express, 2016, 24, 20792.	3.4	74
50	Full-parallax immersive 3D display from depth-map cameras. , 2016, , .		1
51	Three-Dimensional Integral-Imaging Display From Calibrated and Depth-Hole Filtered Kinect Information. Journal of Display Technology, 2016, 12, 1301-1308.	1.2	9
52	Reducing effects of aberration in 3D fluorescence imaging using wavefront coding with a radially symmetric phase mask. Optics Express, 2016, 24, 12905.	3.4	10
53	Full parallax three-dimensional display from Kinect v1 and v2. Optical Engineering, 2016, 56, 1.	1.0	26
54	Diabetes screening by telecentric digital holographic microscopy. Journal of Microscopy, 2016, 261, 285-290.	1.8	29

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55	Display of travelling 3D scenes from single integral-imaging capture. , 2016, , .		0
56	Free segmentation in rendered 3D images through synthetic impulse response in integral imaging. Proceedings of SPIE, 2016, , .	0.8	0
57	Phase-shifting by means of an electronically tunable lens: quantitative phase imaging of biological specimens with digital holographic microscopy. Optics Letters, 2016, 41, 1416.	3.3	10
58	Computation and Display of 3D Movie From a Single Integral Photography. Journal of Display Technology, 2016, 12, 695-700.	1.2	9
59	Mapping electron-beam-injected trapped charge with scattering scanning near-field optical microscopy. Optics Letters, 2016, 41, 1046.	3.3	7
60	THREE-DIMENSIONAL INTEGRAL MICROSCOPY WITH ENHANCED RESOLUTION AND DEPTH OF FIELD. , 2016, , .		0
61	Depth rendering of large incoherent scenes from integral images. , 2016, , .		0
62	Free-depths reconstruction with synthetic impulse response in integral imaging. Optics Express, 2015, 23, 30127.	3.4	22
63	Spatial light modulator phase mask implementation of wavefront encoded 3D computational-optical microscopy. Applied Optics, 2015, 54, 8587.	2.1	13
64	Full-parallax 3D display from single-shot Kinect capture. Proceedings of SPIE, 2015, , .	0.8	1
65	Optical barriers in integral imaging monitors through micro-Köhler illumination. , 2015, , .		0
66	Fast Axial-Scanning Widefield Microscopy With Constant Magnification and Resolution. Journal of Display Technology, 2015, 11, 913-920.	1.2	45
67	Diffraction by m- bonacci gratings. European Journal of Physics, 2015, 36, 065005.	0.6	7
68	Three-dimensional microscopy through liquid-lens axial scanning. , 2015, , .		3
69	Towards 3D Television Through Fusion of Kinect and Integral-Imaging Concepts. Journal of Display Technology, 2015, 11, 894-899.	1.2	13
70	Resolution enhancement in integral microscopy by physical interpolation. Biomedical Optics Express, 2015, 6, 2854.	2.9	25
71	Full-parallax 3D display from the hole-filtered depth information. , 2015, , .		1
72	Physical compensation of phase curvature in digital holographic microscopy by use of programmable liquid lens. Applied Optics, 2015, 54, 5229.	2.1	27

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73	Integral Imaging Monitors with an Enlarged Viewing Angle. Journal of Information and Communication Convergence Engineering, 2015, 13, 132-138.	0.2	2
74	Three-dimensional display by smart pseudoscopic-to-orthoscopic conversion with tunable focus. Applied Optics, 2014, 53, E19.	1.8	38
75	Enhanced field-of-view integral imaging display using multi-Köhler illumination. Optics Express, 2014, 22, 31853.	3.4	17
76	Implementation of PSF engineering in high-resolution 3D microscopy imaging with a LCoS (reflective) SLM. , 2014, , .		2
77	Time-multiplexing Integral Microscopy. , 2014, , .		1
78	Computation of microimages for plenoptic display. , 2014, , .		0
79	Off-axis digital holographic microscopy: practical design parameters for operating at diffraction limit. Applied Optics, 2014, 53, 2058.	1.8	117
80	Accurate quantitative phase imaging through telecentric digital holographic microscopy. , 2014, , .		1
81	Accurate single-shot quantitative phase imaging of biological specimens with telecentric digital holographic microscopy. Journal of Biomedical Optics, 2014, 19, 046022.	2.6	85
82	Enhancing spatial resolution in digital holographic microscopy by biprism structured illumination. Optics Letters, 2014, 39, 2086.	3.3	29
83	Depth-of-Field Enhancement in Integral Imaging by Selective Depth-Deconvolution. Journal of Display Technology, 2014, 10, 182-188.	1.2	16
84	Photoelastic Analysis of Partially Occluded Objects With an Integral-Imaging Polariscope. Journal of Display Technology, 2014, 10, 255-262.	1.2	10
85	Aberration compensation for objective phase curvature in phase holographic microscopy: comment. Optics Letters, 2014, 39, 417.	3.3	15
86	Fuzzy Integral Imaging Camera Calibration for Real Scale 3D Reconstructions. Journal of Display Technology, 2014, 10, 601-608.	1.2	6
87	Investigation of the SQUBIC phase mask design for depth-invariant widefield microscopy point-spread function engineering. , 2014, , .		5
88	From the plenoptic camera to the flat integral-imaging display. Proceedings of SPIE, 2014, , .	0.8	4
89	Three-Dimensional Imaging and Display through Integral Photography. Journal of Information and Communication Convergence Engineering, 2014, 12, 89-96.	0.2	4
90	Extended depth-of-field in integral imaging by depth-dependent deconvolution. , 2013, , .		0

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91	Non-Homogeneity of Lateral Resolution in Integral Imaging. Journal of Display Technology, 2013, 9, 37-43.	1.2	28
92	Algorithms for transforming an integral photography into a plenoptic picture. , 2013, , .		0
93	Fractal square zone plates. Optics Communications, 2013, 286, 42-45.	2.1	20
94	Curvature phase factor in digital holographic microscopy. , 2013, , .		1
95	Elemental images for integral-imaging display. , 2013, , .		0
96	Axial resonance of periodic patterns by using a Fresnel biprism. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2013, 30, 140.	1.5	17
97	Shift-variant digital holographic microscopy: inaccuracies in quantitative phase imaging. Optics Letters, 2013, 38, 1352.	3.3	47
98	Bifocal Fibonacci Diffractive Lenses. IEEE Photonics Journal, 2013, 5, 3400106-3400106.	2.0	72
99	Shaded-Mask Filtering for Extended Depth-of-Field Microscopy. Journal of Information and Communication Convergence Engineering, 2013, 11, 139-146.	0.2	5
100	Three-dimensional resolvability in an integral imaging system. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 525.	1.5	15
101	High-resolution far-field integral-imaging camera by double snapshot. Optics Express, 2012, 20, 890.	3.4	73
102	Three-dimensional polarimetric computational integral imaging. Optics Express, 2012, 20, 15481.	3.4	27
103	Multispectral integral imaging acquisition and processing using a monochrome camera and a liquid crystal tunable filter. Optics Express, 2012, 20, 25960.	3.4	28
104	Subtractive imaging in confocal scanning microscopy using a CCD camera as a detector. Optics Letters, 2012, 37, 1280.	3.3	55
105	Improved resolution in far-field integral imaging. , 2012, , .		0
106	ls it worth using an array of cameras to capture the spatio-angular information of a 3D scene or is it enough with just two?. Proceedings of SPIE, 2012, , .	0.8	6
107	3D resolution in computationally reconstructed integral photography. Proceedings of SPIE, 2012, , .	0.8	2
108	Optically-undistorted digital holographic microscopy for quantitative phase-contrast imaging. , 2011, ,		0

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109	Digital holographic microscopy with pure-optical spherical phase compensation. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 1410.	1.5	90
110	Fully programmable display parameters in integral imaging by smart pseudoscopic-to-orthoscopic conversion. Proceedings of SPIE, 2011, , .	0.8	1
111	Microscopic and macroscopic 3D imaging and display by integral imaging. , 2011, , .		2
112	Lightfield recording and reconstruction by integral imaging. , 2011, , .		0
113	Confocal scanning microscope using a CCD camera as a pinhole-detector system. , 2011, , .		Ο
114	New Analytical Tools for Evaluation of Spherical Aberration in Optical Microscopy. , 2011, , 85-99.		1
115	Optical-sectioning microscopy by patterned illumination. Journal of Physics: Conference Series, 2010, 206, 012011.	0.4	0
116	The high-numerical approach for the 3D sampling theorem. 3D Research, 2010, 1, 36-38.	1.8	0
117	Novel proposals in widefield 3D microscopy. , 2010, , .		3
118	Optical slicing of large scenes by synthetic aperture integral imaging. , 2010, , .		5
119	Method to Remedy Image Degradations Due to Facet Braiding in 3D Integral-Imaging Monitors. Journal of Display Technology, 2010, 6, 404-411.	1.2	40
120	3D integral imaging display by smart pseudoscopic-to-orthoscopic conversion (SPOC). Optics Express, 2010, 18, 25573.	3.4	87
121	Optical implementation of micro-zoom arrays for parallel focusing in integral imaging. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2010, 27, 495.	1.5	14
122	Progress in 3D imaging and display by integral imaging. Proceedings of SPIE, 2009, , .	0.8	3
123	Progress in 3-D Multiperspective Display by Integral Imaging. Proceedings of the IEEE, 2009, 97, 1067-1077.	21.3	146
124	Reduction of spherical-aberration impact in microscopy by wavefront coding. Optics Express, 2009, 17, 13810.	3.4	32
125	Chapter 1 The Resolution Challenge in 3D Optical Microscopy. Progress in Optics, 2009, 53, 1-67.	0.6	47
126	Opto-digital tomographic reconstruction of the Wigner distribution function of complex fields. Applied Optics, 2008, 47, E63.	2.1	8

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127	Digital slicing of 3D scenes by Fourier filtering of integral images. Optics Express, 2008, 16, 17154.	3.4	32
128	Three Dimensional Sensing, Visualization, and Display. , 2008, , .		0
129	Simple demonstration of the impact of spherical aberration on optical imaging. European Journal of Physics, 2008, 29, 619-627.	0.6	1
130	3D integral imaging with optical processing. Proceedings of SPIE, 2008, , .	0.8	0
131	Progresses in 3D integral imaging with optical processing. Journal of Physics: Conference Series, 2008, 139, 012012.	0.4	4
132	Fundamental Challenges In 3D Integral Imaging. AIP Conference Proceedings, 2007, , .	0.4	0
133	Point-spread-function Engineering in High-NA Optical Scanning Microscopy: Desensitizing to Sample-induced Aberrations. AIP Conference Proceedings, 2007, , .	0.4	0
134	Relay optics for enhanced integral imaging. , 2007, , .		0
135	Facet braiding: a fundamental problem in integral imaging. Optics Letters, 2007, 32, 1078.	3.3	34
136	White-light imaging with fractal zone plates. Optics Letters, 2007, 32, 2109.	3.3	83
137	Devil's lenses. Optics Express, 2007, 15, 13858.	3.4	53
138	Enhanced viewing-angle integral imaging by multiple-axis telecentric relay system. Optics Express, 2007, 15, 16255.	3.4	103
139	Manufacture of pupil filters for 3D beam shaping. Optics Communications, 2007, 272, 197-204.	2.1	7
140	Focusing properties of aperiodic zone plates. , 2006, , .		0
141	Reduction of the spherical aberration effect in high-numerical-aperture optical scanning instruments. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 3150.	1.5	24
142	Optically-corrected elemental images for undistorted Integral image display. Optics Express, 2006, 14, 9657.	3.4	73
143	Analysis of 3-D Integral Imaging Displays Using the Wigner Distribution. Journal of Display Technology, 2006, 2, 180-185.	1.2	11

144 Orthoscopic long-focal-depth integral imaging by hybrid method. , 2006, , .

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145	Orthoscopic long-focal-depth 3D integral imaging. , 2006, , .		0
146	Optimized integral imaging display by global pixel mapping. , 2006, 6311, 631101.		1
147	Detection of wave aberrations in the human eye using a retinoscopy-like technique. Optics Communications, 2006, 260, 767-771.	2.1	3
148	Overcoming sensor constraints in 3D integral imaging. , 2005, 5986, 35.		0
149	Quasi-spherical focal spot in two-photon scanning microscopy by three-ring apodization. Microscopy Research and Technique, 2005, 67, 22-26.	2.2	6
150	Integral imaging with extended depth of field. , 2005, , .		0
151	Extended Depth-of-Field 3-D Display and Visualization by Combination of Amplitude-Modulated Microlenses and Deconvolution Tools. Journal of Display Technology, 2005, 1, 321-327.	1.2	63
152	Multifacet structure of observed reconstructed integral images. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2005, 22, 597.	1.5	69
153	Quasi-isotropic 3-D resolution in two-photon scanning microscopy. Optics Express, 2005, 13, 6168.	3.4	20
154	Formation of real, orthoscopic integral images by smart pixel mapping. Optics Express, 2005, 13, 9175.	3.4	142
155	Reduction of focus size in tightly focused linearly polarized beams. Applied Physics Letters, 2004, 85, 4319.	3.3	19
156	Optical-sectioning improvement in two-color excitation scanning microscopy. Microscopy Research and Technique, 2004, 64, 96-102.	2.2	11
157	Analytical Evaluation of the Temporal Focal Shift for Arbitrary Pulse Shapes. IEEE Photonics Technology Letters, 2004, 16, 2245-2247.	2.5	1
158	Fractal zone plates with variable lacunarity. Optics Express, 2004, 12, 4227.	3.4	64
159	Enhanced depth of field integral imaging with sensor resolution constraints. Optics Express, 2004, 12, 5237.	3.4	98
160	Integral imaging with improved depth of field by use of amplitude-modulated microlens arrays. Applied Optics, 2004, 43, 5806.	2.1	118
161	Three-dimensional imaging with high spatial resolution: scanning microscopy. , 2004, 5556, 158.		0
162	Focal shift in optical waves with off-axis focus. Optics Communications, 2003, 216, 11-17.	2.1	4

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163	Fractal zone plates. Optics Letters, 2003, 28, 971.	3.3	179
164	Photonic Structures: Fractal Zone Plates Produce Axial Irradiance With Fractal Profile. Optics and Photonics News, 2003, 14, 31.	0.5	3
165	Axial gain resolution in optical sectioning fluorescence microscopy by shaded-ring filters. Optics Express, 2003, 11, 1740.	3.4	77
166	Assessment of a Wigner-distribution-function-based method to compute the polychromatic axial response given by an aberrated optical system. Optical Engineering, 2003, 42, 753.	1.0	1
167	Three-ring filters increase the effective NA up to 1.46 in optical sectioning fluorescence microscopy. Journal Physics D: Applied Physics, 2003, 36, 1669-1674.	2.8	5
168	Axial behaviour of Cantor ring diffractals. Journal of Optics, 2003, 5, S361-S364.	1.5	2
169	Axial behavior of Cantor rings diffractals. , 2003, , .		Ο
170	<title>Axial irradiance computation using the Wigner distribution function: assessment of the method</title> . , 2001, , .		0
171	Synthesis of filters for specified axial irradiance by use of phase–space tomography. Optics Communications, 2001, 189, 15-19.	2.1	4
172	Simultaneous display of all the Fresnel diffraction patterns of one-dimensional apertures. American Journal of Physics, 2001, 69, 799-802.	0.7	2
173	White-light optical implementation of the fractional Fourier transform with adjustable order control. Applied Optics, 2000, 39, 238.	2.1	9
174	Analytical formulation of the axial behavior of apodized general Bessel beams. Optics Communications, 1999, 169, 1-8.	2.1	5
175	<title>Wigner distribution function applied to the calculation of the axial irradiance impulse response</title> ., 1999, , .		Ο
176	<title>Radon-Wigner transform applied to optical wave propagation and to parallel fractional correlation</title> . , 1999, , .		0
177	On-axis irradiance for spherically aberrated optical systems with obscured rectangular apertures: A study using the Wigner distribution function. Journal of Modern Optics, 1998, 45, 69-77.	1.3	6
178	Spatial coherence properties of a multiple aperture system an analysis based on the Walsh functions. Journal of Modern Optics, 1997, 44, 715-729.	1.3	2
179	Radon–Wigner display: a compact optical implementation with a single varifocal lens. Applied Optics, 1997, 36, 8363.	2.1	21
180	Polychromatic axial behavior of aberrated optical systems: Wigner distribution function approach. Applied Optics, 1997, 36, 9146.	2.1	9

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181	Variable fractional Fourier processor: a simple implementation. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1997, 14, 853.	1.5	20
182	Variable fractional Fourier processor: a simple implementation: erratum. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1997, 14, 3432.	1.5	0
183	Analysis of the irradiance along different paths in the image space using the Wigner distribution function. Optics Communications, 1997, 139, 11-16.	2.1	11
184	<title>Polychromatic merit functions in terms of the Wigner distribution function</title> . , 1996, , .		1
185	<title>Supergaussian modes in GRIN fibers</title> . , 1996, 2730, 328.		0
186	Tunable axial superresolution by annular binary filters. Application to confocal microscopy. Optics Communications, 1995, 119, 491-498.	2.1	72
187	Hybrid optical–digital method for local-displacement analysis by use of a phase-space representation. Applied Optics, 1995, 34, 4713.	2.1	4
188	Achromatic White-light Self-imaging Phenomenon: An Approach Using the Wigner Distribution Function. Journal of Modern Optics, 1995, 42, 425-434.	1.3	40
189	Phase-space representations as a tool for the evaluation of the polychromatic OTF. Optics Communications, 1993, 96, 208-213.	2.1	14
190	Supergaussian beams of continuous order as GRIN modes. Optics Communications, 1993, 102, 21-24.	2.1	19
191	Incoherent optical correlator. , 1990, , .		Ο