

Jeroen Beeckman

List of Publications by Year in descending order

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156
papers

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citations

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all docs

158
docs citations

158
times ranked

1927
citing authors

#	ARTICLE	IF	CITATIONS
1	Disclination lines in nematic liquid crystal between a structured photoalignment layer and a homeotropic alignment layer. <i>Journal of Molecular Liquids</i> , 2022, 352, 118710.	2.3	5
2	Influence of period and surface anchoring strength in liquid crystal optical axis gratings. <i>Soft Matter</i> , 2022, 18, 3249-3256.	1.2	3
3	Submicrometer photoalignment for photonic components based on tilted chiral liquid crystal. , 2022, , .		0
4	PZT based actuator for an efficient electro-optomechanical interaction in Si-photonic integrated circuits. , 2022, , .		0
5	Nematic Liquid Crystal Disclination Lines Driven by A Photoaligned Defect Grid. <i>Advanced Optical Materials</i> , 2022, 10, .	3.6	7
6	PZT Based Acoustic Resonator for the Refractive Index Modulation. , 2022, , .		0
7	Low power optical phase shifter using liquid crystal actuation on a silicon photonics platform. <i>Optical Materials Express</i> , 2022, 12, 2181.	1.6	10
8	Light Modulation in Silicon Photonics by PZT Actuated Acoustic Waves. <i>ACS Photonics</i> , 2022, 9, 1944-1953.	3.2	3
9	Driving issues of large area liquid crystal devices. <i>Liquid Crystals</i> , 2021, 48, 281-294.	0.9	3
10	Design and Realization of a Compact Efficient Beam Combiner, Based on Liquid Crystal Pancharatnamâ€“Berry Phase Gratings. <i>Crystals</i> , 2021, 11, 220.	1.0	6
11	In-plane characterization of PZT thin films for the creation of a general impedance model. <i>Journal of Applied Physics</i> , 2021, 129, .	1.1	4
12	Fringe-field-induced out-of-plane reorientation in vertically aligned nematic spatial light modulators and its effect on light diffraction. <i>Liquid Crystals</i> , 2021, 48, 1516-1524.	0.9	8
13	Reversible and Tunable Secondâ€“Order Nonlinear Optical Susceptibility in PZT Thin Films for Integrated Optics. <i>Advanced Optical Materials</i> , 2021, 9, 2100149.	3.6	6
14	Large, Electric-Field Induced Tunable and Reversible $\chi^{(2)}$ in PZT Thin Films for on-chip second-order nonlinearities. , 2021, , .		0
15	Reversible and Tunable Secondâ€“Order Nonlinear Optical Susceptibility in PZT Thin Films for Integrated Optics (<i>Advanced Optical Materials</i> 16/2021). <i>Advanced Optical Materials</i> , 2021, 9, 2170062.	3.6	1
16	Rotationally invariant ring-shaped liquid crystal structures between two substrates with different photoalignment. <i>Journal of Molecular Liquids</i> , 2021, 337, 116238.	2.3	9
17	Hydrodynamics of fringing-field induced defects in nematic liquid crystals. <i>Journal of Applied Physics</i> , 2021, 130, .	1.1	10
18	Role of homeotropic alignment strength at the air interface of polymerized liquid crystal layers. <i>Optical Materials Express</i> , 2021, 11, 4036.	1.6	6

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19	Acousto-optic modulation in a Si-waveguide. , 2021, , .		1
20	Large Angle Forward Diffraction by Chiral Liquid Crystal Gratings with Inclined Helical Axis. Crystals, 2020, 10, 807.	1.0	18
21	75â€³: Highly Collimated Backlight for Liquid Crystal Displays. Digest of Technical Papers SID International Symposium, 2020, 51, 1120-1123.	0.1	1
22	Active Optical Beam Shaping Based on Liquid Crystals and Polymer Micro-Structures. Crystals, 2020, 10, 977.	1.0	6
23	Ring-shaped liquid crystal structures through patterned planar photo-alignment. Soft Matter, 2020, 16, 4999-5008.	1.2	23
24	Observation of symmetry breaking in photoalignment-induced periodic 3D LC structures. Journal of Molecular Liquids, 2020, 306, 112864.	2.3	9
25	Design, fabrication and characterization of a distributed Bragg reflector for reducing the Å©tendue of a wavelength converting system. Optics Express, 2020, 28, 12837.	1.7	19
26	Improvement of liquid crystal tunable lenses with weakly conductive layers using multifrequency driving. Optics Letters, 2020, 45, 1001.	1.7	5
27	Liquid Crystal Based Active Phase Modulator for Silicon Nitride Photonics Circuits at Near-Infrared. , 2020, , .		0
28	A Strong Pockels PZT/Si Modulator for Efficient Electro-Optic Tuning. , 2020, , .		3
29	Si-photonic integrated PZT thin film for acousto-optic modulation. , 2020, , .		3
30	Tilted Chiral Liquid Crystal Gratings for Efficient Largeâ€”Angle Diffraction. Advanced Optical Materials, 2019, 7, 1901364.	3.6	44
31	Self-Trapping of Light Using the Pancharatnam-Berry Phase. Physical Review X, 2019, 9, .	2.8	16
32	Optical Self-Localization Based upon the Pancharatnam-Berry Phase. , 2019, , .		0
33	Self-Written Y-Junctions using Spatial Solitons. , 2019, , .		0
34	Mode coupling by scattering in chiral nematic liquid crystal ring lasing. Optics Express, 2019, 27, 8081.	1.7	4
35	Voltage-controlled formation of short pitch chiral liquid crystal structures based on high-resolution surface topography. Optics Express, 2019, 27, 11492.	1.7	12
36	Generation of multiple solitons using competing nonlocal nonlinearities. Optics Letters, 2019, 44, 1162.	1.7	13

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37	Hybrid PZT/Si TM/TE electro-optic phase modulators. , 2019, , .		2
38	Surface-Mediated Alignment of Long Pitch Chiral Nematic Liquid Crystal Structures. Advanced Optical Materials, 2018, 6, 1800070.	3.6	14
39	Chiral Superstructures in Liquid Crystals: Periodic Planar-Homeotropic Anchoring Realized by Photoalignment for Stabilization of Chiral Superstructures (Advanced Optical Materials 6/2018). Advanced Optical Materials, 2018, 6, 1870025.	3.6	0
40	Solvent-induced self-assembly of uniform lying helix alignment of the cholesteric liquid crystal phase for the flexoelectro-optic effect. Liquid Crystals, 2018, 45, 774-782.	0.9	5
41	Periodic Planar-Homeotropic Anchoring Realized by Photoalignment for Stabilization of Chiral Superstructures. Advanced Optical Materials, 2018, 6, 1701163.	3.6	26
42	Electrically assisted bandedge mode selection of photonic crystal lasing in chiral nematic liquid crystals. Applied Physics Letters, 2018, 112, .	1.5	14
43	Light-induced multi-wavelength lasing in dye-doped chiral nematic liquid crystals due to strong pumping illumination. Liquid Crystals, 2018, 45, 1272-1278.	0.9	9
44	Nanophotonic Pockels modulators on a silicon nitride platform. Nature Communications, 2018, 9, 3444.	5.8	163
45	Liquid Crystal Superstructures: Surface-Mediated Alignment of Long Pitch Chiral Nematic Liquid Crystal Structures (Advanced Optical Materials 13/2018). Advanced Optical Materials, 2018, 6, 1870053.	3.6	0
46	Refractive Bessel lattice in azobenzene liquid crystal. Journal of Modern Optics, 2018, 65, 2034-2043.	0.6	4
47	Complex liquid crystal superstructures induced by periodic photo-alignment at top and bottom substrates. Soft Matter, 2018, 14, 6892-6902.	1.2	31
48	Interplay between multiple scattering and optical nonlinearity in liquid crystals. Optics Letters, 2018, 43, 3461.	1.7	6
49	Multi-electrode tunable liquid crystal lenses with one lithography step. Optics Letters, 2018, 43, 271.	1.7	44
50	Advances in PZT-on-SiN electro-optic modulator platform. , 2018, , .		0
51	Peculiarities of spatial soliton formation in azobenzene liquid crystal. , 2018, , .		0
52	Optimization of liquid crystal devices based on weakly conductive layers for lensing and beam steering. Journal of Applied Physics, 2017, 121, .	1.1	12
53	New materials for modulators and switches in silicon photonics (Conference Presentation). , 2017, , .		0
54	Spatial fluctuations of optical solitons due to long-range correlated dielectric perturbations in liquid crystals. Physical Review A, 2017, 96, .	1.0	10

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55	Hybrid fluorescent layer emitting polarized light. APL Materials, 2017, 5, .	2.2	9
56	Broadband Electro-optic Modulation using Low-loss PZT-on-Silicon Nitride Integrated Waveguides. , 2017, , .		9
57	Tunable light beam steering device using polymer stabilized blue phase liquid crystals. Photonics Letters of Poland, 2017, 9, 11.	0.2	6
58	Spatial instabilities in nematicon propagation generated by correlated noise in liquid crystals. , 2017, , .		0
59	Tuning the lasing wavelength of dye-doped chiral nematic liquid crystal by fluid flow. Liquid Crystals, 2016, , 1-7.	0.9	2
60	The role of segregation in the polarized emission from polyfluorene embedded in a liquid crystal. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 1558-1563.	2.4	1
61	Ferroelectric thin films with liquid crystal for gradient index applications. Optics Express, 2016, 24, 8088.	1.7	10
62	Nematicon-driven injection of amplified spontaneous emission into an optical fiber. Optics Letters, 2016, 41, 2245.	1.7	14
63	Light-controlled reorientation of nematic liquid crystal driven by an electric field. Liquid Crystals, 2016, 43, 1422-1430.	0.9	2
64	Reflective liquid crystal hybrid beam-steerer. Optics Express, 2016, 24, 21541.	1.7	13
65	Inducing monodomain blue phase liquid crystals by long-lasting voltage application during temperature variation. Liquid Crystals, 2016, 43, 688-693.	0.9	16
66	Liquid crystal devices with continuous phase variation based on high-permittivity thin films. Proceedings of SPIE, 2016, , .	0.8	0
67	Strong collection of Amplified Spontaneous Emission with nematicons. , 2016, , .		0
68	Paper No S2.4: Large-Scale and Electroswitchable Polarized Emission From Semiconductor Nanorods Aligned in Polymeric Nanofibers. Digest of Technical Papers SID International Symposium, 2015, 46, 12-12.	0.1	0
69	Paper No S1.3: Lead Zirconate Titanate-Based Transmissive Liquid Crystal Lens Approach. Digest of Technical Papers SID International Symposium, 2015, 46, 7-7.	0.1	0
70	Thin Film Polarized Liquid Crystal Backlight. Digest of Technical Papers SID International Symposium, 2015, 46, 37-37.	0.1	0
71	Thin film polarizer and color filter based on photo-polymerizable nematic liquid crystal. Proceedings of SPIE, 2015, , .	0.8	2
72	Optical gain from polyfluorene keto defects in a liquid crystal mixture. Chemical Communications, 2015, 51, 9686-9689.	2.2	2

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73	Electrically Controllable Liquid Crystal Component for Efficient Light Steering. IEEE Photonics Journal, 2015, 7, 1-13.	1.0	22
74	New materials and devices for optical interconnect. , 2015, , .		0
75	Optical induction of Bessel-like lattices in methyl-red doped liquid crystal cells. Optics Communications, 2015, 338, 467-472.	1.0	10
76	Lanthanide-Assisted Deposition of Strongly Electro-optic PZT Thin Films on Silicon: Toward Integrated Active Nanophotonic Devices. ACS Applied Materials & Interfaces, 2015, 7, 13350-13359.	4.0	58
77	Large-Scale and Electroswitchable Polarized Emission from Semiconductor Nanorods Aligned in Polymeric Nanofibers. ACS Photonics, 2015, 2, 583-588.	3.2	38
78	Microsecond-range optical shutter for unpolarized light with chiral nematic liquid crystal. AIP Advances, 2015, 5, .	0.6	1
79	Hybrid VCSEL: liquid crystal systems. , 2015, , .		0
80	Digitally Controlled Phase Shifter Using an SOI Slot Waveguide With Liquid Crystal Infiltration. IEEE Photonics Technology Letters, 2015, 27, 1269-1272.	1.3	48
81	Electrically tuneable lateral leakage loss in liquid crystal clad shallow-etched silicon waveguides. Optics Express, 2015, 23, 2846.	1.7	11
82	Optimization of electrically tunable VCSEL with intracavity nematic liquid crystal. Optics Express, 2015, 23, 15706.	1.7	11
83	Switchable 3D liquid crystal grating generated by periodic photo-alignment on both substrates. Soft Matter, 2015, 11, 7802-7808.	1.2	42
84	One- and two-dimensional liquid crystal structures for lasing applications. Proceedings of SPIE, 2015, , .	0.8	3
85	Vertical-Cavity Surface-Emitting Laser With a Chiral Nematic Liquid Crystal Overlay. IEEE Photonics Journal, 2014, 6, 1-10.	1.0	6
86	Direct digital control of an efficient silicon+liquid crystal phase shifter. , 2014, , .		2
87	Tuning the lateral leakage loss of TM-like modes in shallow-etched waveguides using liquid crystals. Applied Optics, 2014, 53, 214.	0.9	5
88	Effect of UV curing conditions on polymerized tunable chiral nematic liquid crystals. Proceedings of SPIE, 2014, , .	0.8	0
89	Widely tunable chiral nematic liquid crystal optical filter with microsecond switching time. Optics Express, 2014, 22, 19098.	1.7	25
90	Vertical-cavity surface-emitting laser with a liquid crystal external cavity. Optics Letters, 2014, 39, 6494.	1.7	11

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91	Fast polarisation-insensitive optical shutter supported by backflow in dichroic dye-doped dual-frequency liquid crystal. <i>Liquid Crystals</i> , 2014, 41, 1553-1558.	0.9	10
92	Modeling optical modes of in-plane liquid crystal lasers. , 2014, , .		0
93	Vertical-cavity surface-emitting laser with liquid crystal external cavity. <i>Proceedings of SPIE</i> , 2014, , .	0.8	0
94	Vertical-Cavity Surface-Emitting Laser With Cholesteric Liquid Crystal Overlay. <i>Journal of Lightwave Technology</i> , 2014, 32, 20-26.	2.7	8
95	Active Liquid Crystal Tuning of Metallic Nanoantenna Enhanced Light Emission from Colloidal Quantum Dots. <i>Nano Letters</i> , 2014, 14, 5555-5560.	4.5	47
96	Synthesis and mesomorphic properties of laterally substituted 4,4'-dialkyl-p-terphenyls. <i>Liquid Crystals</i> , 2014, 41, 503-513.	0.9	34
97	Electrically tunable Fabry-Perot lasing in nematic liquid crystal cells. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2014, 31, 1516.	0.9	6
98	Theoretical study of reorientation and torque of liquid crystal molecules under influence of external electric field and experimentally generation of spatial optical soliton beam and getting a sharp switching in chiral nematic liquid crystal. <i>Optik</i> , 2013, 124, 3983-3986.	1.4	6
99	Preferentially oriented BaTiO ₃ thin films deposited on silicon with thin intermediate buffer layers. <i>Nanoscale Research Letters</i> , 2013, 8, 62.	3.1	30
100	Vertical-cavity surface-emitting laser emitting circularly polarized light. <i>Laser Physics Letters</i> , 2013, 10, 105003.	0.6	14
101	Numerical simulation of stimulated emission and lasing in dye doped cholesteric liquid crystal films. <i>Journal of Applied Physics</i> , 2013, 113, 063106.	1.1	15
102	VCSELs with nematic and cholesteric liquid crystal overlays. <i>Proceedings of SPIE</i> , 2013, , .	0.8	0
103	Vertical cavity surface emitting laser with nematic and chiral liquid crystals overlay. <i>Proceedings of SPIE</i> , 2013, , .	0.8	0
104	Trimming of silicon-on-insulator ring resonators with a polymerizable liquid crystal cladding. <i>Optics Letters</i> , 2012, 37, 1475.	1.7	17
105	Simulating the Emission Properties of Luminescent Dyes within One-Dimensional Uniaxial Liquid Crystal Microcavities. <i>Molecular Crystals and Liquid Crystals</i> , 2012, 560, 82-92.	0.4	2
106	850nm VCSEL with a liquid crystal overlay. , 2012, , .		0
107	Light emission from dye-doped cholesteric liquid crystals at oblique angles: Simulation and experiment. <i>Physical Review E</i> , 2012, 85, 041702.	0.8	37
108	Highly photoluminescent Eu(III) complexes of the new 1-triphenyl-2-yl-3-trifluoroacetylacetone. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2012, 250, 85-91.	2.0	21

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109	VCSEL With Photo-Aligned Liquid Crystal Overlay. IEEE Photonics Technology Letters, 2012, 24, 1509-1512.	1.3	17
110	Liquid-crystal photonic applications. Optical Engineering, 2011, 50, 081202.	0.5	201
111	Multicasting optical interconnects using liquid crystal over silicon devices. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 363.	0.8	7
112	Tuning silicon-on-insulator ring resonators with in-plane switching liquid crystals. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 79.	0.9	21
113	Optical Analysis of Small Pixel Liquid Crystal Microdisplays. Journal of Display Technology, 2011, 7, 156-161.	1.3	5
114	Dipole radiation within one-dimensional anisotropic microcavities: a simulation method. Optics Express, 2011, 19, 18558.	1.7	35
115	Wide tuning of silicon-on-insulator ring resonators with a liquid crystal cladding. Optics Letters, 2011, 36, 3876.	1.7	56
116	Waveguides with liquid crystals. Proceedings of SPIE, 2011, , .	0.8	0
117	Self-focusing mechanism in nematic liquid crystals with sub-millisecond response. Proceedings of SPIE, 2011, , .	0.8	0
118	Switching and intrinsic position bistability of soliton beams in chiral nematic liquid crystals. Physical Review A, 2011, 83, .	1.0	14
119	Widely tunable silicon-on-insulator ring resonators with a liquid crystal cladding. , 2011, , .		1
120	Finite element optical modeling of liquid crystal waveguides. Optical Engineering, 2011, 50, 081204.	0.5	1
121	Three-dimensional finite element modeling of liquid crystal devices. Proceedings of SPIE, 2011, , .	0.8	0
122	Liquid crystals in waveguides for tuning and sensing. Photonics Letters of Poland, 2011, 3, .	0.2	1
123	Propagation of nematicons in unbiased configurations: spiraling solitons. Proceedings of SPIE, 2010, , .	0.8	0
124	Diffraction and fringing field effects in small pixel liquid crystal devices with homeotropic alignment. Journal of Applied Physics, 2010, 108, 083104.	1.1	12
125	Finding exact spatial soliton profiles in nematic liquid crystals. Optics Express, 2010, 18, 3311.	1.7	15
126	Numerical Simulations of Electrically Induced Birefringence in Photonic Liquid Crystal Fibers. Acta Physica Polonica A, 2010, 118, 1113-1117.	0.2	8

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127	Tunable quasi-homeotropic liquid crystal pretilt angle based on competing alignment layers. <i>Liquid Crystals</i> , 2009, 36, 1373-1377.	0.9	7
128	Effect of material properties on reverse flow in nematic liquid crystal devices with homeotropic alignment. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	13
129	Orientation of nematic liquid crystal in open glass microstructures. <i>Journal of Applied Physics</i> , 2009, 106, 063101.	1.1	2
130	Fast Visible-Near Infrared Switchable Liquid Crystal Filter. <i>Molecular Crystals and Liquid Crystals</i> , 2009, 502, 9-18.	0.4	4
131	Tunable Silicon-on-Insulator based integrated optical filters with liquid crystal cladding. , 2009, , .		1
132	Polarization Selective Wavelength Tunable Filter. <i>Molecular Crystals and Liquid Crystals</i> , 2009, 502, 19-28.	0.4	9
133	Countering spatial soliton breakdown in nematic liquid crystals. <i>Optics Letters</i> , 2009, 34, 1900.	1.7	13
134	Tuning of silicon-on-insulator ring resonators with liquid crystal cladding using the longitudinal field component. <i>Optics Letters</i> , 2009, 34, 2054.	1.7	41
135	Calculation of Fully Anisotropic Liquid Crystal Waveguide Modes. <i>Journal of Lightwave Technology</i> , 2009, 27, 3812-3819.	2.7	45
136	A finite element beam propagation method for simulation of liquid crystal devices. <i>Optics Express</i> , 2009, 17, 10895.	1.7	42
137	Non-linear light propagation and bistability in nematic liquid crystals. <i>Proceedings of SPIE</i> , 2009, , .	0.8	2
138	New wavelength-tuning method in optical ring resonators with liquid crystal cladding: exploiting the longitudinal E-field. <i>Proceedings of SPIE</i> , 2009, , .	0.8	0
139	Induced modulation instability and recurrence in nonlocal nonlinear media. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2008, 41, 065402.	0.6	4
140	Conductor grid optimization for luminance loss reduction in organic light emitting diodes. <i>Journal of Applied Physics</i> , 2008, 103, .	1.1	43
141	Dynamics of charge transport in planar devices. <i>Physical Review E</i> , 2008, 78, 011502.	0.8	65
142	Wave guiding with liquid crystals. , 2007, , .		4
143	Nonlinear wave guiding in nematic liquid crystals. , 2007, , .		2
144	Induced modulation instability and recurrence in nematic liquid crystals. <i>Optics Express</i> , 2007, 15, 11185.	1.7	25

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145	Near-infrared luminescence emitted by an electrically switched liquid crystal cell. <i>Journal of Luminescence</i> , 2007, 127, 611-615.	1.5	22
146	Realization of a Four-Electrode Liquid Crystal Device With Full In-Plane Director Rotation. <i>IEEE Transactions on Electron Devices</i> , 2007, 54, 1295-1300.	1.6	5
147	Quasistationary current contributions in electronic devices. <i>Opto-electronics Review</i> , 2007, 15, .	2.4	13
148	Observation of out-coupling of a nematicon. <i>Opto-electronics Review</i> , 2006, 14, .	2.4	6
149	Lateral Light Propagation in SSFLC Devices and Thermal Optical Nonlinearities. <i>Ferroelectrics</i> , 2006, 344, 225-231.	0.3	2
150	Patterned electrode steering of nematicons. <i>Journal of Optics</i> , 2006, 8, 214-220.	1.5	40
151	Simulation of 2-D lateral light propagation in nematic-liquid-crystal cells with tilted molecules and nonlinear reorientational effect. <i>Optical and Quantum Electronics</i> , 2005, 37, 95-106.	1.5	20
152	A four-electrode liquid crystal device for 2D in-plane director rotation. <i>Journal Physics D: Applied Physics</i> , 2005, 38, 3976-3984.	1.3	5
153	Time dependence of soliton formation in planar cells of nematic liquid crystals. <i>IEEE Journal of Quantum Electronics</i> , 2005, 41, 735-740.	1.0	23
154	Measurement of the self-induced waveguide of a solitonlike optical beam in a nematic liquid crystal. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2005, 22, 1424.	0.9	95
155	Simulations and experiments on self-focusing conditions in nematic liquid-crystal planar cells. <i>Optics Express</i> , 2004, 12, 1011.	1.7	110
156	One-dimensional simulation of field-induced director reorientation and lateral light propagation in liquid crystals. , 2004, , .		2