Aleksandar D RakiÄ

List of Publications by Year
in descending order

165 papers	6,943 citations	159358 30 h-index	60497 81 g-index
168 all docs	168 docs citations	168 times ranked	6523 citing authors

#	Article	IF	Citations
1	Optical constants from scattering-type scanning near-field optical microscope. Applied Physics Letters, 2021, 118, .	1.5	19
2	Observation of optical feedback dynamics in single-mode terahertz quantum cascade lasers: Transient instabilities. Physical Review A, 2021, 103, .	1.0	19
3	Sub-surface damage detection in marble structures using THz time domain and laser feedback interferometric imaging techniques. , 2021, , .		1
4	Near-field terahertz nanoscopy of coplanar microwave resonators. Applied Physics Letters, 2021, 119, .	1.5	10
5	Quantifying relative moisture content in dielectric models using CW-THz spectroscopy and supervised machine learning regression. , 2021, , .		1
6	Terahertz quantum cascade laser under optical feedback: effects of laser self-pulsations on self-mixing signals. Optics Express, 2021, 29, 39885.	1.7	6
7	Terahertz imaging with self-pulsations in quantum cascade lasers under optical feedback. APL Photonics, 2021, 6, 091301.	3.0	6
8	Probing Peptide Nanowire Conductivity by THz Nanoscopy. Nanotechnology, 2021, 33, .	1.3	3
9	External cavity terahertz quantum cascade laser with a metamaterial/graphene optoelectronic mirror. Applied Physics Letters, 2020, 117, .	1.5	13
10	Corrections to â€œMode Selection and Tuning Mechanisms in Coupled-Cavity Terahertz Quantum Cascade Lasersâ€•[Jul/Aug 17 Art. no. 1200312]. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-1.	1.9	0
11	Laser feedback interferometry in multi-mode terahertz quantum cascade lasers. Optics Express, 2020, 28, 14246.	1.7	15
12	Monitoring Water Dynamics in Plants using Laser Feedback Interferometry. , 2020, , .		3
13	Corrections to â€œTemperature-Dependent High-Speed Dynamics of Terahertz Quantum Cascade Lasersâ€• [Jul/Aug 17 Art. no. 1200209]. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-1.	1.9	0
14	Sensing and imaging using laser feedback interferometry with quantum cascade lasers. Applied Physics Reviews, 2019, 6, 021320.	5.5	52
15	Probing Ultrafast Switch-on Dynamics of Frequency Tuneable Semiconductor Lasers Using Terahertz Time-domain Spectroscopy. , 2019, , .		0
16	Dual-Modality Confocal Laser Feedback Tomography for Highly Scattering Medium. IEEE Sensors Journal, 2019, 19, 6134-6140.	2.4	8
17	Acoustic flat lensing using an indefinite medium. Physical Review B, 2019, 99, .	1.1	12
18	Coherent imaging using laser feedback interferometry with pulsed-mode terahertz quantum cascade lasers. Optics Express, 2019, 27, 10221.	1.7	31

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19	Detection sensitivity of laser feedback interferometry using a terahertz quantum cascade laser. Optics Letters, 2019, 44, 3314.	1.7	15
20	Frequency Tuning Range Control in Pulsed Terahertz Quantum-Cascade Lasers: Applications in Interferometry. IEEE Journal of Quantum Electronics, 2018, 54, 1-8.	1.0	9
21	Determining Ethanol Content of Liquid Solutions Using Laser Feedback Interferometry with a Terahertz Quantum Cascade Laser. , 2018, 2, 1-4.		9
22	Confocal laser feedback microscopy for inâ€depth imaging applications. Electronics Letters, 2018, 54, 196-198.	0.5	8
23	Polarization-sensitive laser feedback interferometry for specular reflection removal. Applied Optics, 2018, 57, 4067.	0.9	5
24	Ultrafast switch-on dynamics of frequency-tuneable semiconductor lasers. Nature Communications, 2018, 9, 3076.	5.8	16
25	Microparticle discrimination using laser feedback interferometry. Optics Express, 2018, 26, 25778.	1.7	8
26	Mode Selection and Tuning Mechanisms in Coupled-Cavity Terahertz Quantum Cascade Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 1-12.	1.9	12
27	Surface roughness characterisation using optical feedback interferometry. Electronics Letters, 2017, 53, 268-270.	0.5	4
28	Temperature-Dependent High-Speed Dynamics of Terahertz Quantum Cascade Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 1-9.	1.9	7
29	Measurement of the emission spectrum of a semiconductor laser using laser-feedback interferometry. Scientific Reports, 2017, 7, 7236.	1.6	20
30	Confocal laser feedback tomography for skin cancer detection. Biomedical Optics Express, 2017, 8, 4037.	1.5	19
31	Multi-spectral terahertz sensing: proposal for a coupled-cavity quantum cascade laser based optical feedback interferometer. Optics Express, 2017, 25, 10153.	1.7	15
32	Laser Feedback Interferometry as a Tool for Analysis of Granular Materials at Terahertz Frequencies: Towards Imaging and Identification of Plastic Explosives. Sensors, 2016, 16, 352.	2.1	27
33	Concurrent Reflectance Confocal Microscopy and Laser Doppler Flowmetry to Improve Skin Cancer Imaging: A Monte Carlo Model and Experimental Validation. Sensors, 2016, 16, 1411.	2.1	10
34	Model for a pulsed terahertz quantum cascade laser under optical feedback. Optics Express, 2016, 24, 20554.	1.7	16
35	Origin of terminal voltage variations due to self-mixing in terahertz frequency quantum cascade lasers. Optics Express, 2016, 24, 21948.	1.7	10
36	Optical feedback effects on terahertz quantum cascade lasers: modelling and applications. , 2016, , .		1

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37	Diffuse reflectance imaging for non-melanoma skin cancer detection using laser feedback interferometry. , 2016, , .		1
38	A Compact Laser Imaging System for Concurrent Reflectance Confocal Microscopy and Laser Doppler Flowmetry. IEEE Photonics Journal, 2016, 8, 1-9.	1.0	8
39	Terahertz frequency quantum cascade lasers: Optical feedback effects and applications. , 2016, , .		1
40	Simple Electrical Modulation Scheme for Laser Feedback Imaging. IEEE Sensors Journal, 2016, 16, 1937-1942.	2.4	20
41	FPGA implementation of a highâ€speed, realâ€time, windowed standard deviation filter. Electronics Letters, 2016, 52, 22-23.	0.5	7
42	Terahertz radar crossâ€section characterisation using laser feedback interferometry with quantum cascade laser. Electronics Letters, 2015, 51, 1774-1776.	0.5	12
43	Efficient prediction of terahertz quantum cascade laser dynamics from steady-state simulations. Applied Physics Letters, 2015, 106, .	1.5	32
44	Terahertz quantum cascade laser bandwidth prediction. , 2015, , .		0
45	Monte Carlo model of laser Doppler perfusion imaging in skin cancer detection. , 2015, , .		0
46	Laser feedback interferometry: a tutorial on the self-mixing effect for coherent sensing. Advances in Optics and Photonics, 2015, 7, 570.	12.1	294
47	Effect of the optical system on the Doppler spectrum in laser-feedback interferometry. Applied Optics, 2015, 54, 18.	0.9	30
48	Active phase-nulling of the self-mixing phase in a terahertz frequency quantum cascade laser. Optics Letters, 2015, 40, 950.	1.7	9
49	Multiple signal classification for self-mixing flowmetry. Applied Optics, 2015, 54, 2193.	0.9	13
50	Three-dimensional terahertz imaging using swept-frequency feedback interferometry with a quantum cascade laser. Optics Letters, 2015, 40, 994.	1.7	35
51	Effect of injection current and temperature on signal strength in a laser diode optical feedback interferometer. Applied Optics, 2015, 54, 312.	0.9	27
52	Effect of the optical numerical aperture on the Doppler spectrum in laser Doppler velocimetry. , 2014, , .		0
53	A QCL model with integrated thermal and stark rollover mechanisms. , 2014, , .		0
54	Laser dynamics under frequencyâ€shifted optical feedback with random phase. Electronics Letters, 2014, 50, 1380-1382.	0.5	5

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55	THz QCL self-mixing interferometry for biomedical applications. , 2014, , .		1
56	On the nature of Acketâ€™s characteristic parameter C in semiconductor lasers. Applied Optics, 2014, 53, 1001.	0.9	39
57	Imaging of acoustic fields using optical feedback interferometry. Optics Express, 2014, 22, 30346.	1.7	68
58	Self-mixing sensing system based on uncooled vertical-cavity surface-emitting laser array: linking multichannel operation and enhanced performance. Optics Letters, 2014, 39, 394.	1.7	8
59	High-contrast coherent terahertz imaging of porcine tissue via swept-frequency feedback interferometry. Biomedical Optics Express, 2014, 5, 3981.	1.5	41
60	Methodology for materials analysis using swept-frequency feedback interferometry with terahertz frequency quantum cascade lasers. Optics Express, 2014, 22, 18633.	1.7	20
61	Terahertz inverse synthetic aperture radar imaging using self-mixing interferometry with a quantum cascade laser. Optics Letters, 2014, 39, 2629.	1.7	36
62	Terahertz imaging using quantum cascade lasersâ€”a review of systems and applications. Journal Physics D: Applied Physics, 2014, 47, 374008.	1.3	141
63	Solving self-mixing equations for arbitrary feedback levels: a concise algorithm. Applied Optics, 2014, 53, 3723.	0.9	59
64	Coherent THz imaging using the self-mixing effect in quantum cascade lasers. , 2014, , .		0
65	Self-Mixing Interferometry With Terahertz Quantum Cascade Lasers. IEEE Sensors Journal, 2013, 13, 37-43.	2.4	46
66	Flow profile measurement in microchannel using the optical feedback interferometry sensing technique. Microfluidics and Nanofluidics, 2013, 14, 113-119.	1.0	59
67	On the feasibility of self-mixing interferometer sensing for detection of the surface electrocardiographic signal using a customized electro-optic phase modulator. Physiological Measurement, 2013, 34, 281-289.	1.2	19
68	Swept-frequency feedback interferometry using terahertz frequency QCLs: a method for imaging and materials analysis. Optics Express, 2013, 21, 22194.	1.7	91
69	Self-mixing laser Doppler flow sensor: an optofluidic implementation. Applied Optics, 2013, 52, 8128.	0.9	24
70	Approach to frequency estimation in self-mixing interferometry: multiple signal classification. Applied Optics, 2013, 52, 3345.	0.9	30
71	Coherent three-dimensional terahertz imaging through self-mixing in a quantum cascade laser. Applied Physics Letters, 2013, 103, .	1.5	45
72	Demonstration of the self-mixing effect in interband cascade lasers. Applied Physics Letters, 2013, 103, .	1.5	17

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73	Profiling the change in refractive index using the self-mixing effect in lasers. , 2012, , .		0
74	Integrated optofluidic flow sensor using the self-mixing effect. , 2012, , .		0
75	Comparison of the RF characteristics of inversion channel and depletion channel SOS MOSFETs. , 2012, , .		0
76	Optical electrocardiograph using self-mixing interferometer technique with a customized electro-optic phase modulator. , 2012, , .		0
77	Self-mixing laser velocimetry: A realistic model. , 2012, , .		0
78	Electrocardiographic signal detection using self-mixing interferometer technique with customized electro-optic phase modulator. , 2012, , .		2
79	Spectral broadening caused by dynamic speckle in self-mixing velocimetry sensors. Optics Express, 2012, 20, 18757.	1.7	42
80	SOS junctionless MOSFETs vs. inversion channel MOSFETs: Doubling the device speed without changing the technology. Microwave and Optical Technology Letters, 2012, 54, 2755-2757.	0.9	1
81	Towards a scanning laser confocal microscope using the self-mixing effect. , 2012, , .		0
82	Comparison of SOS MOSFET's Equivalent Circuit Parameters Extracted From LCR Meter and VNA Measurement. IEEE Transactions on Electron Devices, 2012, 59, 20-25.	1.6	4
83	Terahertz sensing and imaging using a quantum cascade laser. , 2011, , .		0
84	Terahertz imaging through self-mixing in a quantum cascade laser. Optics Letters, 2011, 36, 2587.	1.7	149
85	Maintaining maximum signal-to-noise ratio in uncooled vertical-cavity surface-emitting laser-based self-mixing sensors. Optics Letters, 2011, 36, 3690.	1.7	18
86	Improvement in off-State Leakage Current of n-Channel SOS MOSFETs by Hydrogen Annealing of the SOS Film. IEEE Transactions on Electron Devices, 2011, 58, 3787-3792.	1.6	3
87	Demonstration of a self-mixing displacement sensor based on terahertz quantum cascade lasers. Applied Physics Letters, 2011, 99, .	1.5	63
88	Flow profile measurement in micro-channels using changes in laser junction voltage due to Self-mixing effect. , 2011, , .		3
89	Influence of ambient temperature on the performance of VCSEL based self-mixing sensors: Flow measurements. , 2011, , .		1
90	Self-mixing interferometer technique based on VCSEL under the Effect of Polarization Mode switching. , 2010, , .		0

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91	A novel self-mixing sensor architecture using a PLL for noise immunity. , 2010, , .		0
92	Extraction of SOS MOSFET RF equivalent circuit elements by LCR meter measurements. Electronics Letters, 2010, 46, 863.	0.5	3
93	A Self-Mixing Displacement Sensor With Fringe-Loss Compensation for Harmonic Vibrations. IEEE Photonics Technology Letters, 2010, 22, 410-412.	1.3	70
94	A Novel, Fast, Approximate Target Detection Technique for Metallic Target Below a Frequency Dependant Lossy Halfspace. IEEE Transactions on Antennas and Propagation, 2010, 58, 1699-1710.	3.1	12
95	Self-mixing flow sensor using a monolithic VCSEL array with parallel readout. Optics Express, 2010, 18, 11720.	1.7	85
96	GaN laser self-mixing velocimeter for measuring slow flows. Optics Letters, 2010, 35, 814.	1.7	34
97	Adaptive self-mixing vibrometer based on a liquid lens. Optics Letters, 2010, 35, 1278.	1.7	48
98	Harmonic levels in self-mixing interferometry. , 2010, , .		0
99	“Lens-free” self-mixing sensor for velocity and vibrations measurements. , 2010, , .		2
100	Rapid scanning flow sensor based on the self-mixing effect in a VCSEL. , 2010, , .		4
101	Temperature and current dependence of doppler SNR in a VCSEL based self-mixing sensor. , 2009, , .		0
102	Self-mixing imaging sensor using a monolithic VCSEL array with parallel readout. Optics Express, 2009, 17, 5517.	1.7	55
103	Design of microcavity organic light emitting diodes with optimized electrical and optical performance. Applied Optics, 2009, 48, 2282.	2.1	5
104	Angular dependence of the emission from low Q-factor organic microcavity light emitting diodes. Displays, 2008, 29, 358-364.	2.0	2
105	3,4,9,10-Perylenetetracarboxylicdiimide as an interlayer for ultraviolet organic light emitting diodes. Optics Communications, 2008, 281, 2498-2503.	1.0	9
106	Self-mixing displacement sensing using the junction voltage variation in a GaN laser. Optoelectronic and Microelectronic Materials and Devices (COMMAD), Conference on, 2008, , .	0.0	3
107	Origin of the low frequency type curve in Silicon-on-Sapphire MOS capacitors. Optoelectronic and Microelectronic Materials and Devices (COMMAD), Conference on, 2008, , .	0.0	0
108	Monitoring the Electrical Properties of the Back Silicon Interface of Silicon-on-Sapphire Wafers. IEEE Electron Device Letters, 2008, 29, 325-327.	2.2	5

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109	Photodiode-free Doppler velocimeter based on self-mixing effect in commercial VCSELs. , 2008, , .		3
110	Multi-objective optimization of microcavity OLEDs with DBR mirror. , 2007, , .		1
111	Minimising crosstalk in microchannel free-space optical interconnects with the presence of higher order modes. , 2007, , .		0
112	Effect of multiple transverse modes in self-mixing sensors based on vertical-cavity surface-emitting lasers. Applied Optics, 2007, 46, 611.	2.1	27
113	Analysis of hexagonal array geometry for free-space optical interconnects with improved signal-to-noise ratio. Applied Optics, 2007, 46, 2434.	2.1	4
114	Parallel self-mixing imaging system based on an array of vertical-cavity surface-emitting lasers. Applied Optics, 2007, 46, 6237.	2.1	18
115	A Critical Comparison of High-Speed VCSEL Characterization Techniques. Journal of Lightwave Technology, 2007, 25, 597-605.	2.7	19
116	Optimization of microcavity OLED by varying the thickness of multi-layered mirror. Optical and Quantum Electronics, 2007, 38, 1091-1099.	1.5	2
117	Optimization of microcavity OLED by varying the thickness of multi-layered mirror. , 2006, , .		1
118	Top Emitting OLEDs with multi-layered Mirror Consisting of Metallic and Dielectric Layers. , 2006, , .		0
119	Device optimization of tris-aluminum (Alq3) based bilayer organic light emitting diode structures. Smart Materials and Structures, 2006, 15, S92-S98.	1.8	9
120	Fluid flow rate measurement using the change in laser junction voltage due to the self-mixing effect. , 2006, , .		5
121	Lasersâ€"an effective artificial source of radiation for the cultivation of anoxygenic photosynthetic bacteria. Biotechnology and Bioengineering, 2006, 94, 337-345.	1.7	21
122	Analysis of the effect of transverse modes on free-space optical interconnect performance. Smart Materials and Structures, 2006, 15, S147-S153.	1.8	0
123	Numerical Modelling Study of the Sensitivity of SOS MOSFET Characteristics to Silicon film Thickness and Back Surface Trapped Charge Variation. , 2006, , .		0
124	A Massively Parallel Imaging System Based on the Self-Mixing Effect in a Vertical-Cavity Surface-Emitting Laser Array. , 2006, , .		0
125	Distance Measurement using the Change in Junction Voltage Across a Laser Diode due to the Self-Mixing Effect. , 2006, , .		4
126	Effect of Anode Material and Cavity Design on the Performance of Microcavity OLEDs. , 2006, , .		0

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127	Novel array geometries for free-space optical interconnects with improved signal-to-noise ratio. , 2005, , .		2
128	Signal-to-signal-to-noise ratio of full-field Fourier domain optical coherence tomography: experiment. , 2005, 5690, 430.		0
129	Reduced angular dependence of the emission from tris(8-hydroxyquinoline) aluminum based microcavity. Optics Communications, 2005, 248, 287-293.	1.0	7
130	Dependence of the emission from tris (8-hydroxyquinoline) aluminum based microcavity on device thickness and the emission layer position. Thin Solid Films, 2005, 489, 235-244.	0.8	6
131	Organic quantum well light emitting diodes. , 2005, , .		1
132	Cavity design and optimization for organic microcavity OLEDs. , 2005, , .		3
133	Response to â€œComment on â€˜Change of the emission spectra in organic light-emitting diodes by layer thickness modificationâ€™â€•[Appl. Phys. Lett. 86, 186101 (2005)]. Applied Physics Letters, 2005, 86, 186102.	1.5	1
134	Analysis of optical channel cross talk for free-space optical interconnects in the presence of higher-order transverse modes. Applied Optics, 2005, 44, 6380.	2.1	28
135	Signal-to-noise ratio study of full-field Fourier-domain optical coherence tomography. Applied Optics, 2005, 44, 7722.	2.1	15
136	Modeling diffraction and imaging of laser beams by the mode-expansion method. Journal of the Optical Society of America B: Optical Physics, 2005, 22, 556.	0.9	4
137	Displacement and distance measurement using the change in junction voltage across a laser diode due to the self-mixing effect. , 2005, 6038, 378.		23
138	Asymmetric Bragg mirrors for the reduction of emission wavelength dependence on the viewing angle in organic microcavity light emitting diodes. Optics Communications, 2004, 236, 303-311.	1.0	15
139	Change of the emission spectra in organic light-emitting diodes by layer thickness modification. Applied Physics Letters, 2004, 85, 2944-2946.	1.5	12
140	Optimization of organic light emitting diode structures. , 2004, 5277, 311.		4
141	Comparison of stray-light and diffraction-caused crosstalk in free-space optical interconnects. , 2004, 5277, 320.		0
142	Derivation and examination of a comprehensive free-space optical interconnect link equation. , 2004, 5277, 251.		0
143	Optimum injection current waveform for a laser rangefinder based on the self-mixing effect. , 2004, , .		9
144	Modeling diffraction in free-space optical interconnects by the mode expansion method. Applied Optics, 2003, 42, 5308.	2.1	20

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145	Cavity and Mirror Design for Vertical-Cavity Surface-Emitting Lasers. Springer Series in Photonics, 2003, , 259-301.	0.8	12
146	Design of microchannel free-space optical interconnects based on vertical-cavity surface-emitting laser arrays. Applied Optics, 2002, 41, 3469.	2.1	29
147	Organic microcavity light-emitting diodes with metal mirrors: dependence of the emission wavelength on the viewing angle. Applied Optics, 2002, 41, 7650.	2.1	41
148	Modeling the optical properties of AlSb, GaSb, and InSb. Applied Physics A: Materials Science and Processing, 2000, 70, 29-32.	1.1	17
149	High-level model of a WDMA passive optical bus for a reconfigurable multiprocessor system. , 2000, , .		0
150	Modeling the optical constants of AlxGa1â^'xAs alloys. Journal of Applied Physics, 1999, 86, 445-451.	1.1	24
151	Modeling the optical constants of GaP, InP, and InAs. Journal of Applied Physics, 1999, 85, 3638-3642.	1.1	16
152	Analysis of lensless free-space optical interconnects based on multi-transverse mode vertical-cavity-surface-emitting lasers. Optics Communications, 1999, 167, 261-271.	1.0	26
153	Optical properties of metallic films for vertical-cavity optoelectronic devices. Applied Optics, 1998, 37, 5271.	2.1	3,357
154	Genetic algorithms for continuous optimization problems - a concept of parameter-space size adjustment. Journal of Physics A, 1997, 30, 7849-7861.	1.6	16
155	Modeling the optical constants of solids using acceptance-probability-controlled simulated annealing with an adaptive move generation procedure. Physical Review E, 1997, 55, 4797-4803.	0.8	55
156	Simulated-annealing-based genetic algorithm for modeling the optical constants of solids. Applied Optics, 1997, 36, 7097.	2.1	13
157	Modeling the optical constants of solids using genetic algorithms with parameter space size adjustment. Optics Communications, 1997, 134, 407-414.	1.0	18
158	Modeling the optical dielectric function of GaAs and AlAs: Extension of Adachiâ€™s model. Journal of Applied Physics, 1996, 80, 5909-5914.	1.1	126
159	Algorithm for the determination of intrinsic optical constants of metal films: application to aluminum. Applied Optics, 1995, 34, 4755.	2.1	534
160	Acceptance-probability-controlled simulated annealing: A method for modeling the optical constants of solids. Physical Review E, 1995, 52, 6862-6867.	0.8	32
161	New Approximate Orientation Averaging of the Water Molecule Interacting with the Thermal Neutron. Nuclear Science and Engineering, 1992, 110, 157-164.	0.5	0
162	Determination of optical properties of aluminium including electron reradiation in the Lorentz-Drude model. Optics and Laser Technology, 1990, 22, 394-398.	2.2	33

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163	Determination of the reflection coefficients of laser light of wavelengths Î»âˆ(022 Î¼m,200 Î¼m) from the surface of aluminum using the Lorentz-Drude model. Applied Optics, 1990, 29, 3479.	2.1	59
164	The effect of broadening on the optical dielectric function of GaAs and AlAs. , 0, , .		0
165	Phase retrieval methods for the determination of transverse mode structure in vertical-cavity surface-emitting lasers. , 0, , .		0