Vitaly I Konov

List of Publications by Citations

376 papers	5,646 citations	38 h-index	57 g-index
417 ext. papers	6,265 ext. citations	2.3 avg, IF	5.32 L-index

#	Paper	IF	Citations
376	Mode-locked 1.93 microm thulium fiber laser with a carbon nanotube absorber. *Optics Letters*, **2008**, 33, 1336-8	3	306
375	Molecular-sized fluorescent nanodiamonds. *Nature Nanotechnology*, **2014**, 9, 54-8	28.7	185
374	Electron field emission for ultrananocrystalline diamond films. *Journal of Applied Physics*, **2001**, 89, 2958-2967	2.5	178
373	Diamond deposition on steel with CVD tungsten intermediate layer. *Diamond and Related Materials*, **1995**, 4, 754-758	3.5	168
372	Nanodiamond Photoemitters Based on Strong Narrow-Band Luminescence from Silicon-Vacancy Defects. *Advanced Materials*, **2009**, 21, 808-812	24	108
371	Hybrid Diamond-Graphite Nanowires Produced by Microwave Plasma Chemical Vapor Deposition. *Advanced Materials*, **2007**, 19, 4058-4062	24	94
370	D.c. arc plasma deposition of smooth nanocrystalline diamond films. *Diamond and Related Materials*, **1995**, 4, 1073-1078	3.5	81
369	Microstructuring of diamond bulk by IR femtosecond laser pulses. *Applied Physics A: Materials Science and Processing*, **2008**, 90, 645-651	2.6	79
368	Micromachining with ultrashort laser pulses: from basic understanding to technical applications **2003**,		70
367	Laser in micro and nanoprocessing of diamond materials. *Laser and Photonics Reviews*, **2012**, 6, 739-766	8.3	69
366	177fs erbium-doped fiber laser mode locked with a cellulose polymer film containing single-wall carbon nanotubes. *Applied Physics Letters*, **2008**, 92, 171113	3.4	66
365	Laser ablation and micropatterning of thin TiN coatings. *Applied Physics A: Materials Science and Processing*, **2000**, 71, 627-631	2.6	59
364	Femtosecond laser microstructuring in the bulk of diamond. *Diamond and Related Materials*, **2009**, 18, 196-199	3.5	56
363	Bone-ablation mechanism using CO2 lasers of different pulse duration and wavelength. *Applied Physics B, Photophysics and Laser Chemistry*, **1993**, 56, 104-112		54
362	Effects of pulse duration in laser processing of diamond-like carbon films. *Diamond and Related Materials*, **2005**, 14, 1368-1376	3.5	52
361	Effects of post-growth treatment and coating with ultrathin metal layers on the band bending and field electron emission of diamond films. *Journal of Applied Physics*, **1998**, 84, 2882-2889	2.5	51
360	Raman and photoluminescence investigations of nanograined diamond films. *Scripta Materialia*, **1995**, 6, 827-830		51

359	Si-doped nano- and microcrystalline diamond films with controlled bright photoluminescence of silicon-vacancy color centers. *Diamond and Related Materials*, **2015**, 56, 23-28	3.5	49
358	Effect of the pulse duration on graphitisation of diamond during laser ablation. *Quantum Electronics*, **2005**, 35, 252-256	1.8	49
357	Diamond/sp2-bonded carbon structures: quantum well field electron emission?. *Diamond and Related Materials*, **2001**, 10, 840-846	3.5	48
356	Laser ablation of dental materials using a microsecond Nd:YAG laser. *Laser Physics*, **2009**, 19, 1056-1060	1.2	47
355	Laser Induced Nanoablation of Diamond Materials. *Physics Procedia*, **2011**, 12, 37-45		47
354	Laser-induced spallation in diamond-like carbon films. *Applied Physics A: Materials Science and Processing*, **2004**, 79, 543-549	2.6	47
353	Early stages of laser graphitization of diamond. *Applied Physics A: Materials Science and Processing*, **2003**, 76, 603-607	2.6	47
352	Structural measurements for single-wall carbon nanotubes by Raman scattering technique. *Scripta Materialia*, **1999**, 12, 567-572		47
351	The role of plasma in ablation of materials by ultrashort laser pulses. *Quantum Electronics*, **2001**, 31, 378-382	1.8	46
350	Effect of high temperature annealing on optical and thermal properties of CVD diamond. *Diamond and Related Materials*, **2001**, 10, 546-551	3.5	45
349	Fracture strength of optical quality and black polycrystalline CVD diamonds. *Diamond and Related Materials*, **2012**, 23, 172-177	3.5	43
348	Starting mechanisms and dynamics of bubble formation induced by a Ho:Yttrium aluminum garnet laser in water. *Journal of Applied Physics*, **1998**, 84, 5905-5912	2.5	42
347	Delocalization of femtosecond radiation in silicon. *Optics Letters*, **2012**, 37, 3369-71	3	41
346	Studies of the change of a metallic surface microrelief as a result of multiple-pulse action of powerful UV laser pulses. *Journal of Applied Physics*, **1985**, 58, 3909-3913	2.5	41
345	Laser plasmas. *Applied Physics B, Photophysics and Laser Chemistry*, **1982**, 29, 186-188		41
344	Processing constraints resulting from heat accumulation during pulsed and repetitive laser materials processing. *Optics Express*, **2017**, 25, 3966-3979	3.3	40
343	A novel CW laser powder method of carbon single-wall nanotubes production. *Diamond and Related Materials*, **2002**, 11, 927-930	3.5	40
342	Laser polishing of diamond plates. *Applied Physics A: Materials Science and Processing*, **1999**, 69, 81-88	2.6	40

341	Vibrational properties of nitrogen-doped ultrananocrystalline diamond films grown by microwave plasma CVD. *Diamond and Related Materials*, **2007**, 16, 2074-2077	3.5	39
340	Nitrogen-vacancy defects in diamond produced by femtosecond laser nanoablation technique. *Applied Physics Letters*, **2017**, 111, 081101	3.4	38
339	Nitrogenated nanocrystalline diamond films: Thermal and optical properties. *Diamond and Related Materials*, **2007**, 16, 2067-2073	3.5	38
338	Observation of the Ge-vacancy color center in microcrystalline diamond films. *Bulletin of the Lebedev Physics Institute*, **2015**, 42, 165-168	0.5	37
337	Laser-induced forward transfer of ultra-fine diamond particles for selective deposition of diamond films. *Applied Surface Science*, **1995**, 86, 208-212	6.7	37
336	Smoothening of diamond films with an ArF laser. *Diamond and Related Materials*, **1992**, 1, 782-788	3.5	37
335	Photodetectors with CVD diamond films: Electrical and photoelectrical properties photoconductive and photodiode structures. *Diamond and Related Materials*, **1998**, 7, 821-825	3.5	36
334	Express in situ measurement of epitaxial CVD diamond film growth kinetics. *Diamond and Related Materials*, **2017**, 72, 61-70	3.5	35
333	Three-dimensional laser writing in diamond bulk. *Diamond and Related Materials*, **2011**, 20, 264-268	3.5	35
332	Similarity in field electron emission from nanocrystalline diamond and related materials. *Diamond and Related Materials*, **2001**, 10, 1719-1726	3.5	35
331	UV laser processing of diamond films: effects of irradiation conditions on the properties of laser-treated diamond film surfaces. *Diamond and Related Materials*, **1993**, 2, 291-297	3.5	35
330	All-carbon detector with buried graphite pillars in CVD diamond. *Applied Physics A: Materials Science and Processing*, **2014**, 114, 297-300	2.6	34
329	Experimental and theoretical modeling of laser propulsion. *Acta Astronautica*, **1980**, 7, 79-90	2.9	34
328	Amorphous magnetic films produced by pulsed laser deposition. *Journal of Applied Physics*, **1997**, 82, 1408-1415	2.5	32
327	Laser transfer of diamond nanopowder induced by metal film blistering. *Applied Physics A: Materials Science and Processing*, **2009**, 94, 531-536	2.6	31
326	Stress mapping of chemical-vapor-deposited diamond film surface by micro-Raman spectroscopy. *Applied Physics Letters*, **1997**, 71, 1789-1791	3.4	31
325	CVD-diamond □a novel (□)-nonlinear active crystalline material for SRS generation in very wide spectral range. *Laser Physics Letters*, **2006**, 3, 171-177	1.5	30
324	Low-field electron emission of diamond/pyrocarbon composites. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **2001**, 19, 965		29

323	Comparative study of the ablation of materials by femtosecond and pico- or nanosecond laser pulses. *Quantum Electronics*, **1999**, 29, 724-728	1.8	29
322	Delocalization of femtosecond laser radiation in crystalline Si in the mid-IR range. *Laser Physics*, **2016**, 26, 016101	1.2	28
321	Photoinduced laser etching of a diamond surface. *Quantum Electronics*, **2007**, 37, 1043-1046	1.8	28
320	Femtosecond laser writing of buried graphitic structures in bulk diamond. *Applied Physics A: Materials Science and Processing*, **2009**, 97, 543-547	2.6	27
319	CO2-laser radiation absorption by metal gratings. *Applied Physics Letters*, **1984**, 45, 365-367	3.4	27
318	Diamond-EuF3 nanocomposites with bright orange photoluminescence. *Diamond and Related Materials*, **2017**, 72, 47-52	3.5	26
317	Scanning tunnelling microscopy: application to field electron emission studies. *Journal Physics D: Applied Physics*, **1999**, 32, 815-819	3	26
316	On the influence of surface condition on air plasma formation near metals irradiated by microsecond TEA CO2laser pulses. *Journal Physics D: Applied Physics*, **1984**, 17, 709-720	3	26
315	Peculiarities of laser-induced material transformation inside diamond bulk. *Diamond and Related Materials*, **2013**, 37, 50-54	3.5	25
314	Measurements of thermal conductivity of diamond films by photothermal deflection technique. *Journal of Applied Physics*, **1994**, 75, 7795-7798	2.5	25
313	Suppression of thermocapillary waves in laser melting of metals and semiconductors. *Journal of Applied Physics*, **1994**, 76, 800-805	2.5	25
312	On the role of the periodical structures induced by powerful laser irradiation of metallic surfaces in the energy coupling process. *Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics*, **1985**, 132, 395-402		24
311	Laser microprocessing in a gas environment at a high repetition rate of ablative pulses. *Quantum Electronics*, **2004**, 34, 537-540	1.8	23
310	Electronic properties of the emission sites of low-field emitting diamond films. *Diamond and Related Materials*, **2000**, 9, 1196-1200	3.5	23
309	Electroless metallization of diamond films. *Diamond and Related Materials*, **1996**, 5, 1042-1047	3.5	23
308	High-intensity laser irradiation of metallic surfaces covered by periodic structures. *Journal of Applied Physics*, **1987**, 61, 2445-2457	2.5	23
307	Early oxidation stage of copper during cw CO2 laser irradiation. *Applied Physics Letters*, **1984**, 44, 188-189	3.4	23
306	Self-mode-locking in erbium-doped fibre lasers with saturable polymer film absorbers containing single-wall carbon nanotubes synthesised by the arc discharge method. *Quantum Electronics*, **2007**, 37, 205-208	1.8	22

305	High-order Stokes and anti-Stokes Raman generation in CVD diamond. *Physica Status Solidi (B): Basic Research*, **2005**, 242, R4-R6	1.3	22
304	Fabrication of a multilevel THz Fresnel lens by femtosecond laser ablation. *Quantum Electronics*, **2015**, 45, 933-936	1.8	21
303	Application of aluminum phthalocyanine nanoparticles for fluorescent diagnostics in dentistry and skin autotransplantology. *Journal of Biophotonics*, **2010**, 3, 336-46	3.1	21
302	Laser heating method for estimation of carbon nanotube purity. *Applied Physics A: Materials Science and Processing*, **2002**, 74, 393-396	2.6	21
301	Thin film deposition by excimer laser evaporation. *Thin Solid Films*, **1990**, 189, 283-291	2.2	21
300	On the mechanism of surface compound formation by powerful microsecond pulsed TEA CO2laser irradiation in technical nitrogen. *Journal Physics D: Applied Physics*, **1985**, 18, 2547-2555	3	21
299	Nitridation of Ti and Zr by multi-pulse TEA CO2laser irradiation in liquid nitrogen. *Journal Physics D: Applied Physics*, **1986**, 19, 1183-1188	3	20
298	Diamond detectors with laser induced surface graphite electrodes. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2016**, 837, 136-142	1.2	19
297	Diamond device architectures for UV laser monitoring. *Laser Physics*, **2016**, 26, 084005	1.2	19
296	Fabrication of polycrystalline diamond refractive X-ray lens by femtosecond laser processing. *Applied Physics A: Materials Science and Processing*, **2016**, 122, 1	2.6	19
295	Gas-phase growth of silicon-doped luminescent diamond films and isolated nanocrystals. *Bulletin of the Lebedev Physics Institute*, **2011**, 38, 291-296	0.5	19
294	Synthesis of boron nitride multi-walled nanotubes by laser ablation technique. *Laser Physics*, **2009**, 19, 1198-1200	1.2	19
293	Formation and development dynamics of femtosecond laser microplasma in gases. *Quantum Electronics*, **2006**, 36, 638-645	1.8	19
292	Fabrication of CVD Diamond Optics with Antireflective Surface Structures. *Physica Status Solidi A*, **1999**, 174, 171-176		19
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290	Three-dimensional graphite electrodes in CVD single crystal diamond detectors: Charge collection dependence on impinging particles geometry. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2015**, 799, 10-16	1.2	18
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288	Observation of stimulated raman scattering in CVD-diamond. *JETP Letters*, **2004**, 80, 267-270	1.2	18

287	Plasma effects during ablation and drilling using pulsed solid-state lasers **2003**,		18
286	Laser-induced effects in Raman spectra of single-wall carbon nanotubes. *Quantum Electronics*, **2003**, 33, 645-650	1.8	18
285	Titanium and zirconium nitridation under the action of microsecond pulsed TEA CO2laser radiation in technical nitrogen. *Journal Physics D: Applied Physics*, **1985**, 18, 1693-1700	3	18
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283	Direct observation of graphenic nanostructures inside femtosecond-laser modified diamond. *Carbon*, **2016**, 102, 383-389	10.4	18
282	Plateholder design for deposition of uniform diamond coatings on WC-Co substrates by microwave plasma CVD for efficient turning application. *Diamond and Related Materials*, **2017**, 75, 169-175	3.5	17
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276	Multi-octave frequency comb generation by(3)-nonlinear optical processes in CVD diamond at low temperatures. *Laser Physics Letters*, **2014**, 11, 086101	1.5	16
275	Diamond photonic crystals for the IR spectral range. *Optics Letters*, **2014**, 39, 6962-5	3	16
274	Self-mode locking in aF2-:LiF laser by means of a passive switch based on single-wall carbon nanotubes. *Quantum Electronics*, **2004**, 34, 785-786	1.8	16
273	Hole formation process in laser deep drilling with short and ultrashort pulses **2002**,		16
272	Time-resolved microwave technique for ultrafast charge-carrier recombination time measurements in diamonds and GaAs. *Applied Physics Letters*, **1999**, 74, 1731-1733	3.4	16
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268	Fabrication of diamond microstub photoemitters with strong photoluminescence of SiV color centers: bottom-up approach. *Applied Physics A: Materials Science and Processing*, **2015**, 118, 17-21	2.6	15
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262	Laser-induced modification of bulk fused silica by femtosecond pulses. *Laser Physics*, **2009**, 19, 1294-1299	2.2	14
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255	Competition of nitrogen doping and graphitization effect for field electron emission from nanocrystalline diamond films. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **2004**, 22, 1319		13
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234	Carbon films deposited from UV laser plasma. *Surface and Coatings Technology*, **1991**, 47, 503-508	4.4	11

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220	Diamond Detector With Laser-Formed Buried Graphitic Electrodes: Micron-Scale Mapping of Stress and Charge Collection Efficiency. *IEEE Sensors Journal*, **2019**, 19, 11908-11917	4	9
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