

СПИСЪК НА НАУЧНИТЕ ТРУДОВЕ НА ПРОФ. ДФЗН НИКОЛАЙ ВИТАНОВ ВИТАНОВ

I. МОНОГРАФИИ

N. V. Vitanov, *Quantum Transitions: Introduction to Time-Dependent Quantum Dynamics of Atoms and Molecules* (на английски), Издателство на СУ, 2010 (в печат)

II. ДИСЕРТАЦИИ

Н. В. Витанов, *Приближение на двете състояния в атомната физика* (на английски), дисертация за научна степен "доктор", СУ "Св. Кл. Охридски", 1994

Н. В. Витанов, *Кодиране, обработка и измерване на квантова информация с атоми, молекули, йони и ансамбли* (на английски), дисертация за научна степен "доктор на физическите науки", СУ "Св. Кл. Охридски", 2008

III. ПУБЛИКАЦИИ В МЕЖДУНАРОДНИ РЕФЕРИРАНИ СПИСАНИЯ С ИМПАКТ ФАКТОР

N	Автори	Заглавие	Списание	бр.	стр.	год.	импакт фактор	цитати
1	N.V. Vitanov and G.S. Panev	<i>On the asymptotic form of the electron wavefunction in the atom and the ion</i>	Europhys. Lett.	16	159-164	1991	2.269	1
2	G.S. Panev and N.V. Vitanov	<i>Total charge-transfer cross sections in collisions of Sr ions with Mg and Ca atoms</i>	J. Phys. B	25	L23-L27	1992	1.916	2
3	N.V. Vitanov and G.S. Panev	<i>Generalization of the Demkov formula in near-resonant charge transfer</i>	J. Phys. B	25	239-248	1992	1.916	7
4	M. Drewsen, N.V. Vitanov, and H.K. Haugen	<i>Transverse laser cooling of a metastable argon beam: dependence on the interaction time</i>	Phys. Rev. A	47	3118-3121	1993	2.991	4
5	M. Drewsen and N.V. Vitanov	<i>Intensifying atomic beams by two-step transverse laser cooling</i>	J. Phys. B	26	4109-16	1993	1.916	1
6	N.V. Vitanov	<i>Generalized Demkov model: strong-coupling approximation</i>	J. Phys. B	26	L53-60	1993	1.916	6
7	M. Drewsen, N.V. Vitanov, and H.K. Haugen	<i>Kinetic effects of three- to thirteen-photon velocity-tuned resonances investigated by a time-of-flight technique</i>	Phys. Rev. A	49	1141-8	1994	2.991	1
8	N.V. Vitanov	<i>Asymmetrized Rosen-Zener model</i>	J. Phys. B	27	1351-60	1994	1.916	5
9	N.V. Vitanov	<i>Generalized Nikitin model: strong-coupling approximation</i>	J. Phys. B	27	1791-805	1994	1.916	5
10	N.V. Vitanov	<i>Complete population return in a two-state system driven by a smooth asymmetric pulse</i>	J. Phys. B	28	L19-22	1995	1.916	3
11	N.V. Vitanov	<i>Shape effects in some two-state models with non-analytic pulse envelopes</i>	J. Phys. B	28	1975-84	1995	1.916	1
12	N.V. Vitanov and P.L. Knight	<i>Coherent excitation of a two-state system by a train of short pulses</i>	Phys. Rev. A	52	2245-61	1995	2.991	26
13	N.V. Vitanov and P.L. Knight	<i>Control of atomic transitions by the symmetry of excitation pulses</i>	Opt. Commun.	121	31-5	1995	1.542	1

14	N.V. Vitanov and P.L. Knight	<i>Coherent excitation by asymmetric pulses</i>	J. Phys. B	28	1905-20	1995	1.916	4
15	N.V. Vitanov and B.M. Garraway	<i>Landau-Zener model: effects of finite coupling duration</i>	Phys. Rev. A	53	4288-304	1996	2.991	85
16	N.V. Vitanov and S. Stenholm	<i>Non-adiabatic effects in population transfer in three-level systems</i>	Opt. Commun.	127	215-22	1996	1.542	24
17	B.M. Garraway and N.V. Vitanov	<i>Population dynamics and phase effects in periodic level crossings</i>	Phys. Rev. A	55	4418-32	1997	2.991	33
18	N.V. Vitanov and S. Stenholm	<i>Analytic properties and effective two-level problems in stimulated Raman adiabatic passage</i>	Phys. Rev. A	55	648-60	1997	2.991	63
19	N.V. Vitanov and S. Stenholm	<i>Pulsed excitation of a transition to a decaying level</i>	Phys. Rev. A	55	2982-8	1997	2.991	15
20	N.V. Vitanov and S. Stenholm	<i>Properties of stimulated Raman adiabatic passage with intermediate-level detuning</i>	Opt. Commun.	135	394-405	1997	1.542	48
21	N.V. Vitanov and S. Stenholm	<i>Population transfer by delayed pulses via continuum states</i>	Phys. Rev. A	56	741-7	1997	2.991	28
22	N.V. Vitanov and S. Stenholm	<i>Population transfer via a decaying state</i>	Phys. Rev. A	56	1463-71	1997	2.991	35
23	N.V. Vitanov and K.-A. Suominen	<i>Time-dependent control of ultracold atoms in magnetic traps</i>	Phys. Rev. A	56	R4377-80	1997	2.991	18
24	R.G. Unanyan, N.V. Vitanov, and S. Stenholm	<i>Suppression of incoherent ionization in population transfer via continuum</i>	Phys. Rev. A	57	462-6	1998	2.991	22
25	N.V. Vitanov	<i>Analytic model of a three-state system driven by two laser pulses on two-photon resonance</i>	J. Phys. B	31	709-25	1998	1.916	22
26	N.V. Vitanov	<i>Adiabatic population transfer by delayed laser pulses in multistate systems</i>	Phys. Rev. A	58	2295-309	1998	2.991	27
27	N.V. Vitanov, B.W. Shore, and K. Bergmann	<i>Adiabatic population transfer in multistate chains via dressed intermediate states</i>	Eur. Phys. J. D	4	15-29	1998	1.398	27
28	N.V. Vitanov	<i>Transition times in the Landau-Zener model</i>	Phys. Rev. A	59	988-94	1999	2.991	69
29	S. Stenholm and N.V. Vitanov	<i>Ambiguity in quantum optics: The pure state</i>	J. Mod. Opt.	46	239-54	1999	1.169	4
30	N.V. Vitanov and K.-A. Suominen	<i>Nonlinear level crossing models</i>	Phys. Rev. A	59	4580-8	1999	2.991	19
31	N.V. Vitanov, K.-A. Suominen, and B.W. Shore	<i>Creation of coherent atomic superpositions by fractional stimulated Raman adiabatic passage</i>	J. Phys. B	32	4535-46	1999	1.916	97
32	N.V. Vitanov	<i>Pulse-order invariance of the initial-state population in multistate chains driven by delayed laser pulses</i>	Phys. Rev. A	60	3308-10	1999	2.991	0
33	N.V. Vitanov and S. Stenholm	<i>Adiabatic population transfer via multiple intermediate states</i>	Phys. Rev. A	60	3820-32	1999	2.991	28
34	R.G. Unanyan, N.V. Vitanov, B.W. Shore, and K. Bergmann	<i>Coherent properties of a tripod system coupled via a continuum</i>	Phys. Rev. A	61	043408(10)	2000	2.991	22
35	N.V. Vitanov, B.W. Shore, R.G. Unanyan, and K. Bergmann	<i>Measuring a coherent superposition</i>	Opt. Commun.	179	73-83	2000	1.542	3
36	N.V. Vitanov	<i>Measuring a coherent superposition of multiple states</i>	J. Phys. B	33	2333-46	2000	1.916	8

37	T. Rickes, L.P. Yatsenko, S. Steuerwald, T. Halfmann, B.W. Shore, N.V. Vitanov, and K. Bergmann	<i>Efficient adiabatic population transfer by two-photon excitation assisted by a laser-induced Stark shift</i>	J. Chem. Phys.	113	534-46	2000	3.122	70
38	N.V. Vitanov, T. Halfmann, B.W. Shore, and K. Bergmann	<i>Laser-induced population transfer by adiabatic passage techniques (review)</i>	Annu. Rev. Phys. Chem.	52	763-809	2001	15.678	358
39	N.V. Vitanov, M. Fleischhauer, B.W. Shore, and K. Bergmann	<i>Coherent manipulation of atoms and molecules by sequential laser pulses (review)</i>	Adv. At. Mol. Opt. Phys.	46	55-190	2001	2.000	207
40	R.G. Unanyan, N.V. Vitanov, and K. Bergmann	<i>Preparation of entangled states by adiabatic passage</i>	Phys. Rev. Lett.	87	137902(4p)	2001	7.728	50
41	N.V. Vitanov, B.W. Shore, L.P. Yatsenko, K. Böhmer, T. Halfmann, T. Rickes, and K. Bergmann	<i>Power broadening revisited: Theory and experiment</i>	Opt. Commun.	199	117-26	2001	1.542	21
42	L.P. Yatsenko, N.V. Vitanov, B.W. Shore, T. Rickes, K. Bergmann	<i>Creation of coherent superpositions using Stark-chirped rapid adiabatic passage</i>	Opt. Commun.	204	413-23	2002	1.542	28
43	R.G. Unanyan, M. Fleischhauer, N.V. Vitanov, and K. Bergmann	<i>Entanglement generation by adiabatic navigation in the space of symmetric multiparticle states</i>	Phys. Rev. A	66	042101(7p)	2002	2.991	19
44	T. Halfmann, T. Rickes, N.V. Vitanov, and K. Bergmann	<i>Lineshapes in coherent two-photon excitation</i>	Opt. Commun.	220	353-9	2003	1.542	9
45	S. Marienfeld, Y. Pashayan, N.V. Vitanov, B.W. Shore, H. Hotop, and K. Bergmann	<i>Influence of laser bandwidth and transit time on the excitation probability of a rovibrational two-level system</i>	J. Chem. Phys.	119	5069-77	2003	3.122	3
46	N.V. Vitanov, L.P. Yatsenko, and K. Bergmann	<i>Population transfer by an amplitude-modulated pulse</i>	Phys. Rev. A	68	043401(8p)	2003	2.991	7
47	L.P. Yatsenko, B.W. Shore, N.V. Vitanov, and K. Bergmann	<i>Retroreflection-induced bichromatic adiabatic passage</i>	Phys. Rev. A	68	043405(13p)	2003	2.991	3
48	F. Vewinger, M. Heinz, R. Garcia Fernandez, N.V. Vitanov, and K. Bergmann	<i>Creation and Measurement of a Coherent Superposition of Quantum States</i>	Phys. Rev. Lett.	91	213001(4p)	2003	7.728	59
49	N.V. Vitanov, Z. Kis, and B.W. Shore	<i>Coherent excitation of a degenerate two-level system by an elliptically polarized laser pulse</i>	Phys. Rev. A	68	063414(16p)	2003	2.991	2
50	N.V. Vitanov and B. Girard	<i>Adiabatic excitation of rotational ladder by chirped laser pulses</i>	Phys. Rev. A	69	033409(13p)	2004	2.991	15
51	Z. Kis, A. Karpati, B.W. Shore, and N.V. Vitanov	<i>Stimulated Raman adiabatic passage among degenerate-level manifolds</i>	Phys. Rev. A	70	053405(20p)	2004	2.991	17
52	G.S. Vasilev and N.V. Vitanov	<i>Coherent excitation of a two-state system by a Gaussian field</i>	Phys. Rev. A	70	053407(11p)	2004	2.991	8
53	P.A. Ivanov, N.V. Vitanov, and K. Bergmann	<i>Effect of dephasing on stimulated Raman adiabatic passage</i>	Phys. Rev. A	70	063409(8p)	2004	2.991	34
54	E.S. Kyoseva and N.V. Vitanov	<i>Resonant excitation amidst dephasing: An exact analytic solution</i>	Phys. Rev. A	71	054102(4p)	2005	2.991	7
55	P.A. Ivanov and N.V. Vitanov	<i>Adiabatic evolution amidst dephasing</i>	Phys. Rev. A	71	063407(7p)	2005	2.991	5
56	R. Garcia-Fernandez, A. Ekers, L.P. Yatsenko, N.V. Vitanov, and K. Bergmann	<i>Control of population flow in coherently driven quantum ladders</i>	Phys. Rev. Lett.	95	043001(4p)	2005	7.728	6
57	Z. Kis, N.V. Vitanov, A. Karpati, C. Barthel, and K. Bergmann	<i>Creation of arbitrary coherent superposition states by stimulated Raman adiabatic passage</i>	Phys. Rev. A	72	033403(10p)	2005	2.991	12
58	G.S. Vasilev and N.V. Vitanov	<i>Coherent excitation of a two-state system by a linearly chirped Gaussian pulse</i>	J. Chem. Phys.	123	174106(10p)	2005	3.122	3
59	S. Maniscalco, J. Piilo, N.V. Vitanov, and S. Stenholm	<i>Transient dynamics of linear quantum amplifiers</i>	Eur. Phys. J. D	36	329-38	2005	1.398	2

60	A.A. Rangelov, N.V. Vitanov, L.P. Yatsenko, B.W. Shore, T. Halfmann, and K. Bergmann	<i>Stark-shift-chirped rapid-adiabatic-passage technique among three states</i>	Phys. Rev. A	72	053403(12p)	2005	2.991	25
61	A.A. Rangelov, J. Piilo, and N.V. Vitanov	<i>Counterintuitive transitions between crossing energy levels</i>	Phys. Rev. A	72	053404(9p)	2005	2.991	4
62	N.V. Vitanov and B.W. Shore	<i>Quantum transitions driven by missing frequencies</i>	Phys. Rev. A	72	052507(8p)	2005	2.991	0
63	P.A. Ivanov, N.V. Vitanov, and K. Bergmann	<i>Spontaneous emission in stimulated Raman adiabatic passage</i>	Phys. Rev. A	72	053412(8p)	2005	2.991	9
64	G.S. Vasilev and N.V. Vitanov	<i>Complete population transfer by a zero-area pulse</i>	Phys. Rev. A	73	023416(6p)	2006	2.991	7
65	E.S. Kyoseva and N.V. Vitanov	<i>Coherent pulsed excitation of degenerate multistate systems: Exact analytic solutions</i>	Phys. Rev. A	73	023420(11p)	2006	2.991	22
66	N.V. Vitanov and B.W. Shore	<i>Stimulated Raman adiabatic passage in a two-state system</i>	Phys. Rev. A	73	053402(4p)	2006	2.991	21
67	L.P. Yatsenko, A.A. Rangelov, N.V. Vitanov, and B.W. Shore	<i>Steering population flow in coherently driven lossy quantum ladders</i>	J. Chem. Phys.	125	014302(7p)	2006	3.122	3
68	X. Lacour, S. Guérin, N.V. Vitanov, L.P. Yatsenko and H.R. Jauslin	<i>Implementation of single-qubit quantum gates by adiabatic passage and static laser phases</i>	Opt. Commun.	264	362-7	2006	1.542	12
69	P.A. Ivanov and N.V. Vitanov	<i>State reconstruction of a qutrit by a minimal set of discrete measurements</i>	Opt. Commun.	264	368-74	2006	1.542	5
70	P.A. Ivanov, E.S. Kyoseva, and N.V. Vitanov	<i>Engineering of arbitrary $U(N)$ transformations by quantum Householder reflection</i>	Phys. Rev. A	74	022323(8p)	2006	2.991	9
71	A.A. Rangelov, N.V. Vitanov, and B.W. Shore	<i>Extension of the Morris-Shore transformation to multilevel ladders</i>	Phys. Rev. A	74	053402(9p)	2006	2.991	11
72	V. Yannopoulos and N.V. Vitanov	<i>Photoexcitation-induced magnetism in arrays of semiconductor nanoparticles with strong excitonic oscillator strength</i>	Phys. Rev. B	74	193304(4p)	2006	3.664	29
73	B.W. Shore and N.V. Vitanov	<i>Overdamping of coherently driven quantum systems</i>	Contemp. Phys.	47	341-62	2006	2.026	2
74	P.A. Ivanov, B.T. Torosov, and N.V. Vitanov	<i>Navigation between quantum states by quantum mirrors</i>	Phys. Rev. A	75	012323(9p)	2007	2.991	3
75	G.S. Vasilev, S.S. Ivanov, and N.V. Vitanov	<i>Degenerate Landau-Zener model: Exact analytic solution</i>	Phys. Rev. A	75	013417(9p)	2007	2.991	8
76	R.G. Unanyan, B.W. Shore, M. Fleischhauer, and N.V. Vitanov	<i>Symmetry protected creation of superposition states and entanglement using circulant Hamiltonians</i>	Phys. Rev. A	75	022305(4p)	2007	2.991	0
77	V. Yannopoulos and N.V. Vitanov	<i>Spontaneous emission of two-level atoms placed within clusters of metallic nanoparticles</i>	J. Phys.: Cond. Matter	19	096210(10p)	2007	2.223	7
78	N.V. Vitanov	<i>Complete population inversion by a phase jump: an exactly soluble model</i>	New J. Phys.	9	58(13p)	2007	3.673	10
79	V. Yannopoulos and N.V. Vitanov	<i>Electromagnetic Green's tensor and photon local density of states calculations for collections of spherical scatterers</i>	Phys. Rev. B	75	115124(9p)	2007	3.664	8
80	X. Lacour, S. Guérin, L.P. Yatsenko, N.V. Vitanov, and H.R. Jauslin	<i>Uniform analytic description of dephasing effects in two-state transitions</i>	Phys. Rev. A	75	033417(6p)	2007	2.991	5
81	V. Yannopoulos and N.V. Vitanov	<i>Fluctuational electrodynamics in the presence of finite thermal sources</i>	Phys. Rev. Lett.	99	053901(4p)	2007	7.728	3
82	E.S. Kyoseva, N.V. Vitanov, and B.W. Shore	<i>Physical realizations of coupled Hilbert-space mirrors for quantum-state engineering</i>	J. Mod. Opt.	54	S393-S413	2007	1.169	1

83	V. Yannopoulos and N.V. Vitanov	<i>First-Principles Theory of Van der Waals Forces between Macroscopic Bodies</i>	Phys. Rev. Lett.	99	120406(4p)	2007	7.728	4
84	A.A. Rangelov, N.V. Vitanov and E. Arimondo	<i>Stimulated Raman adiabatic passage into continuum</i>	Phys. Rev. A	76	043414(8p)	2007	2.991	1
85	B.T. Torosov and N.V. Vitanov	<i>Coherent control of a quantum transition by a phase jump</i>	Phys. Rev. A	76	053404(7p)	2007	2.991	9
86	I.E. Linington and N.V. Vitanov	<i>Robust creation of arbitrary-sized Dicke states of trapped ions by global addressing</i>	Phys. Rev. A	77	R010302(4p)	2008	2.991	21
87	P.A. Ivanov and N.V. Vitanov	<i>Synthesis of arbitrary unitary transformations of collective states of trapped ions by quantum Householder reflections</i>	Phys. Rev. A	77	012335(7p)	2008	2.991	4
88	S.S. Ivanov and N.V. Vitanov	<i>Steering quantum transitions between three crossing energy levels</i>	Phys. Rev. A	77	023406(9p)	2008	2.991	5
89	A.A. Rangelov, N.V. Vitanov, and B.W. Shore	<i>Population trapping in three-state quantum loops revealed by Householder reflections</i>	Phys. Rev. A	77	033404(7p)	2008	2.991	1
90	B.T. Torosov and N.V. Vitanov	<i>Exactly soluble two-state quantum models with linear couplings</i>	J. Phys. A	41	155309(16p)	2008	1.687	2
91	I.E. Linington and N.V. Vitanov	<i>Decoherence-free preparation of Dicke states of trapped ions by collective stimulated Raman adiabatic passage</i>	Phys. Rev. A	77	062327(14p)	2008	2.991	7
92	I.E. Linington, P.A. Ivanov, N.V. Vitanov, and M. Plenio	<i>Robust control of quantized motional states of a chain of trapped ions by collective adiabatic passage</i>	Phys. Rev. A	77	063837(10p)	2008	2.991	2
93	P.A. Ivanov, N.V. Vitanov, and M.B. Plenio	<i>Creation of cluster states of trapped ions by collective addressing</i>	Phys. Rev. A	78	012323(5p)	2008	2.991	10
94	S.S. Ivanov, P.A. Ivanov, and N.V. Vitanov	<i>Simple implementation of a quantum search with trapped ions</i>	Phys. Rev. A	78	R030301(4p)	2008	2.991	5
95	V. Yannopoulos and N.V. Vitanov	<i>Ultra-subwavelength focusing of light by a monolayer of metallic nanoshells with an adsorbed defect</i>	Phys. Stat. Sol. – Rapid Res. Lett.	2	287-9	2008	2.388	4
96	I.E. Linington, P.A. Ivanov, and N.V. Vitanov	<i>Quantum search in a nonclassical database of trapped ions</i>	Phys. Rev. A	79	012322(7p)	2009	2.991	3
97	A.A. Rangelov, N.V. Vitanov and B.W. Shore	<i>Stimulated Raman adiabatic passage analogs in classical physics</i>	J. Phys. B	42	055504(5p)	2009	1.916	1
98	B.T. Torosov and N.V. Vitanov	<i>Phase shifts in nonresonant coherent excitation</i>	Phys. Rev. A	79	042108(9p)	2009	2.991	3
99	V. Yannopoulos and N.V. Vitanov	<i>All-optical nanotraps for atoms atop flat metamaterial lenses: a theoretical study</i>	J. Phys.: Cond. Matter	21	245901(6p)	2009	2.223	2
100	L. Praxmeyer, S. Stenholm and N.V. Vitanov	<i>The information of ambiguity</i>	J. Mod. Opt.	56	1205-19	2009	1.169	0
101	V. Yannopoulos, E. Paspalakis and N.V. Vitanov	<i>Electromagnetically induced transparency and slow light in an array of metallic nanoparticles</i>	Phys. Rev. B	80	035104(6p)	2009	3.664	73
102	V. Yannopoulos and N.V. Vitanov	<i>Degree of polarization of the thermal near field generated by arrays of metallic nanoparticles</i>	Phys. Rev. B	80	035410(4p)	2009	3.664	5
103	G.S. Vasilev, A. Kuhn, and N.V. Vitanov	<i>Optimum pulse shapes for stimulated Raman adiabatic passage</i>	Phys. Rev. A	80	013417(7p)	2009	2.991	20
104	V. Yannopoulos, E. Paspalakis and N.V. Vitanov	<i>Plasmon-Induced Enhancement of Quantum Interference Near Metallic Nanostructures</i>	Phys. Rev. Lett.	103	063602(4p)	2009	7.728	29
105	B.T. Torosov and N.V. Vitanov	<i>Design of discrete Fourier transforms and quantum algorithms by using circulant Hamiltonians</i>	Phys. Rev. A	80	022329(5p)	2009	2.991	1

106	V. Yannopoulos and N.V. Vitanov	<i>First-Principles Study of Casimir Repulsion in Metamaterials</i>	Phys. Rev. Lett.	103	120401(4p)	2009	7.728	32
107	M. Krug, T. Bayer, M. Wollenhaupt, C. Sarpe-Tudoran, T. Baumert, S.S. Ivanov, and N.V. Vitanov	<i>Coherent strong-field control of multiple states by a single chirped femtosecond laser pulse</i>	New J. Phys.	11	105051(17p)	2009	3.673	27
108	L. Praxmeyer, S. Stenholm and N.V. Vitanov	<i>Characteristics of a pure state ambiguity function</i>	J. Phys. A	42	495301(10p)	2009	1.687	0
109	P.A. Ivanov, S.S. Ivanov, N.V. Vitanov, A. Mehring, M. Fleischhauer, and K. Singer	<i>Simulation of a quantum phase transition of polaritons with trapped ions</i>	Phys. Rev. A	80	R060301(4p)	2009	2.991	22
110	V. Yannopoulos and N.V. Vitanov	<i>Neutralization of quantum stiction with interlocking arrays of gold nanopillars</i>	Phys. Stat. Sol. – Rapid Res. Lett.	4	19-21	2010	2.388	1
111	B.W. Shore, A.A. Rangelov, and N.V. Vitanov	<i>Stimulated Raman adiabatic passage with temporal pulselets</i>	Opt. Commun.	283	730-6	2010	1.542	0
112	B.T. Torosov, G.S. Vasilev, and N.V. Vitanov	<i>Symmetries and asymmetries in coherent atomic excitation by chirped laser pulses</i>	Opt. Commun.	283	1338-45	2010	1.542	3
113	A. Rangelov, N.V. Vitanov, and B.W. Shore	<i>Rapid adiabatic passage without level crossing</i>	Opt. Commun.	283	1346-50	2010	1.542	1
114	V. Yannopoulos and N. V. Vitanov	<i>Casimir-Polder interaction between an atom and a periodic nanostructure</i>	Phys. Rev. A	81	042506(7p)	2010	2.991	3
115	S.S. Ivanov, P.A. Ivanov, I.E. Lington, and N.V. Vitanov	<i>Scalable quantum search with trapped ions</i>	Phys. Rev. A	81	042328(6p)	2010	2.991	8
116	I.I. Boradjiev and N.V. Vitanov	<i>Stimulated Raman adiabatic passage with unequal couplings: Beyond two-photon resonance</i>	Phys. Rev. A	81	053415(11p)	2010	2.991	5
117	M. Scala, B. Militello, A. Messina, and N.V. Vitanov	<i>Stimulated Raman adiabatic passage in an open quantum system: Master equation approach</i>	Phys. Rev. A	81	053847(7p)	2010	2.991	5
118	M. Wollenhaupt, T. Bayer, T. Baumert, and N.V. Vitanov	<i>Three-state selective population of dressed states via generalized spectral phase-step modulation</i>	Phys. Rev. A	81	053422(9p)	2010	2.991	16
119	B.D. Bruner, H. Suchowski, N.V. Vitanov, and Y. Silberberg	<i>Strong-Field Spatio-Temporal Ultrafast Coherent Control in Three-Level Atoms</i>	Phys. Rev. A	81	063410(5p)	2010	2.991	12
120	A.A. Rangelov, U. Gaubatz, and N.V. Vitanov	<i>Broadband adiabatic conversion of light polarization</i>	Opt. Commun.	283	3891-4	2010	1.542	4
121	C. Lazarou and N.V. Vitanov	<i>Dephasing effects in stimulated Raman adiabatic passage in tripod configurations</i>	Phys. Rev. A	82	033437(12p)	2010	2.991	6
122	I.I. Boradjiev and N.V. Vitanov	<i>Transition time in the stimulated Raman adiabatic passage technique</i>	Phys. Rev. A	82	043407(8p)	2010	2.991	4
123	M. Scala, B. Militello, A. Messina, and N.V. Vitanov	<i>Stimulated Raman adiabatic passage in a Λ system in the presence of quantum noise</i>	Phys. Rev. A	83	012101(8p)	2011	2.991	5
124	A.A. Rangelov, H. Suchowski, Y. Silberberg, and N.V. Vitanov	<i>Wireless adiabatic power transfer</i>	Annals Phys.	326	626-33	2011	3.065	5
125	S.S. Ivanov and N.V. Vitanov	<i>High-fidelity local addressing of trapped ions and atoms by composite sequences of laser pulses</i>	Opt. Lett.	36	1275-7	2011	3.179	5
126	G.T. Genov, A.A. Rangelov, and N.V. Vitanov	<i>Propagation of light polarization in a birefringent medium: Exact analytic models</i>	Opt. Commun.	284	2642-7	2011	1.542	2
127	B.T. Torosov and N.V. Vitanov	<i>Smooth composite pulses for high-fidelity quantum information processing</i>	Phys. Rev. A	83	053420(7p)	2011	2.991	8
128	B.T. Torosov, S. Guerin, and N.V. Vitanov	<i>High-Fidelity Adiabatic Passage by Composite Sequences of Chirped Pulses</i>	Phys. Rev. Lett.	106	233001(4p)	2011	7.728	18

129	S.S. Ivanov and N.V. Vitanov	<i>Scalable uniform construction of highly conditional quantum gates</i>	Phys. Rev. A	84	022319(5p)	2011	2.991	2
130	M. Scala, B. Militello, A. Messina, and N.V. Vitanov	<i>Microscopic description of dissipative dynamics of a level-crossing transition</i>	Phys. Rev. A	84	023416(5p)	2011	2.991	3
131	B.T. Torosov and N.V. Vitanov	<i>Evolution of superpositions of quantum states through a level crossing</i>	Phys. Rev. A	84	063411 (5p)	2011	2.991	1
132	G.T. Genov, B.T. Torosov and N.V. Vitanov	<i>Optimized control of multistate quantum systems by composite pulse sequences</i>	Phys. Rev. A	84	063413(10p)	2011	2.991	2
133	N.V. Vitanov	<i>Arbitrarily accurate narrowband composite pulse sequences</i>	Phys. Rev. A	84	065404(4p)	2011	2.991	1
134	S.S. Ivanov, A.A. Rangelov, N.V. Vitanov, T. Peters, and T. Halfmann	<i>Highly efficient broadband conversion of light polarization by composite retarders</i>	J. Opt. Soc. Am. A	29	265-9	2012	1.448	3
135	N.V. Vitanov	<i>Synthesis of arbitrary SU(3) transformations of atomic qutrits</i>	Phys. Rev. A	85	032331(9p)	2012	2.991	1
136	A.A. Rangelov and N.V. Vitanov	<i>Complete population transfer in a three-state quantum system by a train of pairs of coincident pulses</i>	Phys. Rev. A	85	043407(5p)	2012	2.991	6
137	A.A. Rangelov and N.V. Vitanov	<i>Broadband sum frequency generation via chirped quasi-phase-matching</i>	Phys. Rev. A	85	045804(4p)	2012	2.991	4
138	A.A. Rangelov and N.V. Vitanov	<i>Achromatic multiple beam splitting by adiabatic passage in optical waveguides</i>	Phys. Rev. A	85	055803(4p)	2012	2.991	9
139	B.T. Torosov and N.V. Vitanov	<i>Adiabatic elimination of a nearly resonant quantum state</i>	J. Phys. B	45	135502(7p)	2012	1.916	2
140	S.S. Ivanov, H.S. Tonchev, and N.V. Vitanov	<i>Time-efficient implementation of quantum search with qudits</i>	Phys. Rev. A	85	062321(5p)	2012	2.991	2
141	A.A. Rangelov and N.V. Vitanov	<i>Mid-range adiabatic wireless energy transfer via a mediator coil</i>	Annals Phys.	327	2245-50	2012	3.065	1
142	T. Peters, S.S. Ivanov, A.A. Rangelov, D. Englisch, N.V. Vitanov, and T. Halfmann	<i>Variable ultrabroadband and narrowband composite polarization retarders</i>	Appl. Opt.	51	7466-74	2012	1.649	0
143	T.G. Tenev and N.V. Vitanov	<i>Relativistic effects for spin splitting of neutral particles: Upper bounds and motional decrease</i>	Phys. Rev. A	86	052114(4p)	2012	2.991	1
144	I.I. Boradjiev and N.V. Vitanov	<i>Power narrowing in coherent atomic excitation by smoothly-shaped pulsed fields</i>	Opt. Commun.	288	91-96	2013	1.542	0
145	M. Berent, A.A. Rangelov, and N.V. Vitanov	<i>Broadband Faraday isolators</i>	J. Opt. Soc. Am. A	30	149-53	2013	1.448	0
146	V. Yannopapas and N.V. Vitanov	<i>Spatiotemporal Control of Temperature in Nanostructures Heated by Coherent Laser Fields</i>	Phys. Rev. Lett.	110	044302(5p)	2013	7.728	7
147	T.G. Tenev and N.V. Vitanov	<i>Zitterbewegung of neutral relativistic particles in static longitudinal fields</i>	Phys. Rev. A	87	012126(5p)	2013	2.991	0
148	T.G. Tenev, P.A. Ivanov and N.V. Vitanov	<i>Proposal for trapped-ion emulation of the electric dipole moment of neutral relativistic particles</i>	Phys. Rev. A	87	022103(5p)	2013	2.991	2
149	S.S. Ivanov, N.V. Vitanov and N.V. Korolkova	<i>Creation of arbitrary Dicke and NOON states of trapped-ion qubits by global addressing with composite pulses</i>	New J. Phys.	15	023039(11p)	2013	3.673	2
150	B. Rousseaux, S. Guérin, and N.V. Vitanov	<i>Synthesis of arbitrary qudit gates by adiabatic passage</i>	Phys. Rev. A	87	032328(4p)	2013	2.991	5
151	G.T. Genov and N.V. Vitanov	<i>Dynamical suppression of unwanted transition channels in multistate quantum systems</i>	Phys. Rev. Lett.	110	133002(5p)	2013	7.728	4

152	T.G. Tenev and N.V. Vitanov	<i>Spin splitting of relativistic particles in three dimensions</i>	J. Phys. B	46	095002(4p)	2013	1.916	0	
153	B.T. Torosov and N.V. Vitanov	<i>Composite stimulated Raman adiabatic passage</i>	Phys. Rev. A	87	043418(5p)	2013	2.991	2	
154	I.I. Boradjiev and N.V. Vitanov	<i>Control of qubits by shaped pulses of finite duration</i>	Phys. Rev. A	88	013402(9p)	2013	2.991	1	
155	H. Hristova, A.A. Rangelov, S. Guérin and N.V. Vitanov	<i>Adiabatic evolution of light in parallel curved optical waveguide array</i>	Phys. Rev. A	88	013808(5p)	2013	2.991	1	
156	M. Berent, A.A. Rangelov, and N.V. Vitanov	<i>Broadband optical isolator in fiber optics</i>	J. Opt.	15	085401(5p)	2013	2.010	0	
157	E.S. Dimova, G.S. Popkirov. D. Comparat, A.A. Rangelov and N.V. Vitanov	<i>Efficient broadband composite optical isolator</i>	Appl. Opt.	52	8528-31	2013	1.649	1	
158	D. Schraft, T. Halfmann, G. T. Genov, and N. V. Vitanov	<i>Experimental demonstration of composite adiabatic passage</i>	Phys. Rev. A	88	063406(9p)	2013	2.991	1	
159	E. Kyoseva and N.V. Vitanov	<i>Arbitrarily accurate passband composite pulses for dynamical suppression of amplitude noise</i>	Phys. Rev. A	88	063410(7p)	2013	2.991	0	
160	L.S. Simeonov, P.A. Ivanov and N.V. Vitanov	<i>Speeding up conditional quantum logic of trapped ion qubits with overlapping pulses</i>	Phys. Rev. A	89	012304(7p)	2014	2.991	0	
161	E.S. Dimova, S.S. Ivanov, G.S. Popkirov and N.V. Vitanov	<i>Highly efficient broadband polarization retarders and tunable polarization filters made of composite stacks of ordinary wave plates</i>	J. Opt. Soc. Am. A	31	952-6	2014	1.448	0	
162	L.S. Simeonov and N.V. Vitanov	<i>Exactly solvable two-state quantum model for a pulse of hyperbolic-tangent shape</i>	Phys. Rev. A	89	043411(7p)	2014	2.991	0	
163	A.A. Rangelov, N.V. Vitanov, and G. Montemezzani	<i>Robust and broadband frequency conversion in composite crystals with tailored segment widths and x2 nonlinearities of alternating signs</i>	Opt. Lett.	39	2959–2962	2014	3.179	0	
164	G.T. Genov, A.A. Rangelov and N.V. Vitanov	<i>Efficient broadband frequency generation by composite crystals</i>	J. Opt.	16	062001(6p)	2014	2.010	0	
165	P.A. Ivanov, N.I. Karchev, N.V. Vitanov and D.G. Angelakis	<i>Quantum simulation of superexchange magnetism in linear ion crystals</i>	Phys. Rev. A	90	012325(9p)	2014	2.991	0	
166	G.T. Genov, D. Schraft, T. Halfmann and N.V. Vitanov	<i>Correction of arbitrary field errors in population inversion of quantum systems by universal composite pulses</i>	Phys. Rev. Lett.	113	043001(5p)	2014	7.728	0	
167	B.T. Torosov and N.V. Vitanov	<i>High-fidelity error-resilient composite phase gates</i>	Phys. Rev. A	90	012341(5p)	2014	2.991	0	
							общо	506.262	2381

IV Доклади на конференции в реферирани списания с импакт фактор

N	Автори	Заглавие	Списание	бр.	стр.	год.	импакт фактор	цитати	
168	M. Scala, B. Militello, A. Messina, and N.V. Vitanov	<i>Detuning effects in STIRAP processes in the presence of quantum noise</i>	Opt. Spektr.	111	623-627	2011	0.673	1	
169	B. Militello, M. Scala, A. Messina, and N.V. Vitanov	<i>Zeno-like phenomena in STIRAP processes</i>	Phys. Scripta	T143	14019	2011	1.296	0	
170	V. Yannopoulos and N.V. Vitanov	<i>Coherent control of surface exciton-polaritons in collections of semiconductor nanoparticles: A theoretical study</i>	Phot. Nanostr.	9	196-200	2011	1.350	0	
							общо всички	509.581	2382

V Публикации в реферирани списания без импакт фактор

N	Автори	Заглавие	Списание	бр.	стр.	год.	импакт фактор	цита-ти
171	A. A. Rangelov, N. V. Vitanov, L. P. Yatsenko, B. W. Shore, T. Halfmann, and K. Bergmann	<i>Level crossing in coherent atomic excitation: New concepts</i>	Bulg. J. Phys.	33	151-171	2006	0.000	0
172	G. S. Vasilev and N. V. Vitanov	<i>Coherent excitation of a two-state system by a Gaussian field</i>	Bulg. J. Phys.	33	172-185	2006	0.000	0
173	P.A. Ivanov and N.V. Vitanov	<i>Synthesis of arbitrary unitary transformations in quantum systems by Householder reflections</i>	AIP Conf. Proc.	963	832-5	2007	0.000	0
174	N. V. Vitanov , B. W. Shore, and L. P. Yatsenko	<i>Atomic absorption profiles associated with pulsed excitation</i>	Ukr. J. Phys.	54	53-62	2009	0.000	0

Списание	импакт фактор за 2013	брой статии
Annual Reviews of Physical Chemistry	15.678	1
Advances in Atomic, Molecular and Optical Physics	2.000	1
Annals of Physics	3.065	2
Applied Optics	1.649	2
Contemporary Physics	2.026	1
European Physical Journal D	1.398	2
Europhysics Letters	2.269	1
Journal of Chemical Physics	3.122	4
Journal of Modern Optics	1.169	3
Journal of Optical Society of America A	1.448	3
Journal of Optics	2.010	2
Journal of Physics A	1.687	2
Journal of Physics B	1.916	15
Journal of Physics - Condensed Matter	2.223	2
New Journal of Physics	3.673	3
Optics and Spectroscopy	0.673	1
Optics Communications	1.542	15
Optics Letters	3.179	2
Photonics and Nanostructures	1.350	1
Physica Scripta	1.296	1
Physica Status Solidi – Rapid Research Letters	2.388	2
Physical Review A	2.991	89
Physical Review B	3.664	4
Physical Review Letters	7.728	11
общо		170

170: статии в международни реферирани списания

509: общ импакт фактор

2382: независими цитирания

31: H индекс (Web of Science)

25: H индекс (без автоцитати)