FranÃ§ois Fillaux

List of Publications by Year
in descending order

105	1,942	236612 25	315357 38
papers	citations	h-index	g-index

107	107	107	992
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The quantum phase-transitions of water. Europhysics Letters, 2017, 119, 40008.	0.7	1
2	A neutron diffraction study of the crystal of benzoic acid from 6 to 293 K and a macroscopic-scale quantum theory of the lattice of hydrogen-bonded dimers. Chemical Physics, 2016, 479, 26-35.	0.9	5
3	Quantum interferences revealed by neutron diffraction accord with a macroscopic-scale quantum-theory of ferroelectrics KH2(1â^'ÎŽD2Ï•PO4. European Physical Journal B, 2016, 89, 1.	0.6	2
4	Neutron scattering studies of K3H(SO4)2 and K3D(SO4)2: The particle-in-a-box model for the quantum phase transition. Journal of Chemical Physics, 2012, 137, 074504.	1.2	9
5	Evidence of macroscopically entangled protons in a mixed isotope crystal of KH_pD_{1â^'p}CO₃. Journal of Physics Condensed Matter, 2010, 22, 045402.	0.7	2
6	A neutron scattering study of strong-symmetric hydrogen bonds in potassium and cesium hydrogen bistrifluoroacetates: Determination of the crystal structures and of the single-well potentials for protons. Journal of Chemical Physics, 2008, 128, 204502.	1.2	12
7	Where are Protons and Deuterons in KH_pD₁ _{â€“} _pCO₃? A Neutron Diffraction Study. Zeitschrift Fur Physikalische Chemie, 2008, 222, 1279-1290.	1.4	0
8	A neutron diffraction study of macroscopically entangled proton states in the high temperature phase of the KHCO3crystal at 340 K. Journal of Physics Condensed Matter, 2008, 20, 015225.	0.7	5
9	Nonlocal protons and deuterons opposed to disorder: a single-crystal neutron diffraction study of KH_{0.76}D_{0.24}CO₃and a theoretical framework. Journal of Physics Condensed Matter, 2008, 20, 252202.	0.7	1
10	The Macroscopic Quantum Behavior of Protons in the KHCO3 Crystal: Theory and Experiments. Progress in Theoretical Chemistry and Physics, 2008, , 319-340.	0.2	1
11	Proton transfer across hydrogen bonds: From reaction path to SchrÃ¶dinger's cat. Pure and Applied Chemistry, 2007, 79, 1023-1039.	0.9	15
12	Proton transfer in the KHCO3 and benzoic acid crystals: A quantum view. Journal of Molecular Structure, 2007, 844-845, 308-318.	1.8	18
13	Extended tunnelling states in the benzoic acid crystal: Infrared and Raman spectra of the OH and OD stretching modes. Physical Chemistry Chemical Physics, 2006, 8, 4327.	1.3	21
14	Synchrotron and neutron diffraction study of 4-methylpyridine-N-oxide at low temperature. Acta Crystallographica Section B: Structural Science, 2006, 62, 627-633.	1.8	8
15	Macroscopic quantum tunnelling of protons in the KHCO3 crystal. Journal of Molecular Structure, 2006, 790, 122-128.	1.8	1
16	Macroscopic quantum entanglement and â€˜super-rigidityâ€™ of protons in the KHCO3crystal from 30 to 300 K. Journal of Physics Condensed Matter, 2006, 18, 3229-3249.	0.7	16
17	Quantum entanglement and nonlocal proton transfer dynamics in dimers of formic acid and analogues. Chemical Physics Letters, 2005, 408, 302-306.	1.2	31
18	Proton transfer in malonaldehyde: From reaction path to SchrÃ¶dingerâ€™s Cat. Chemical Physics Letters, 2005, 415, 357-361.	1.2	21

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19	Proton Dynamics in Solids: Vibrational Spectroscopy with Neutrons. , 2005, , 267-304.		0
20	Comment on ÂQuantum correlations between protons in potassium bicarbonateÂ. Journal of Physics Condensed Matter, 2004, 16, 1007-1010.	0.7	16
21	Proton tunnelling in the intramolecular hydrogen bond of 9-Hydroxyphenalenone. Journal of Molecular Structure, 2004, 700, 147-149.	1.8	4
22	Proton dynamics in an extended array of hydrogen bonds: normal coordinates, proton transfer and macroscopic quantum entanglement in the ground state. Journal of Molecular Structure, 2004, 700, 133-145.	1.8	0
23	Comment on: â€˜A symmetric hydrogen bond revisited: potassium hydrogen maleate by variable temperature, variable pressure neutron diffraction and plane-wave DFT methodsâ€™ [Chem. Phys. Lett. 381 (2003) 102]. Chemical Physics Letters, 2004, 399, 289-291.	1.2	10
24	VIBRATIONAL SPECTROSCOPY AND QUANTUM LOCALIZATION. Advanced Series in Nonlinear Dynamics, 2004, , 73-148.	0.4	4
25	Interplay of quantum methyl rotation and crystal structure in the lithium acetate dihydrate: neutron diffraction, inelastic neutron scattering and theory. Chemical Physics, 2003, 290, 101-120.	0.9	12
26	Collective rotational tunneling of methyl groups and quantum solitons in 4-methylpyridine: Neutron scattering studies of single crystals. Physical Review B, 2003, 68, .	1.1	9
27	Observation of the dynamical structure arising from spatially extended quantum entanglement and long-lived quantum coherence in theKHCO3crystal. Physical Review B, 2003, 67, .	1.1	29
28	EXPERIMENTAL STUDIES AND THEORY OF NONLINEAR ROTATIONAL DYNAMICS IN THE QUANTUM REGIME: THE INTERPLAY OF STRUCTURE, DYNAMICS AND LOCALIZATION IN CRYSTALS. , 2003, , .		0
29	COLLECTIVE ROTATIONAL TUNNELLING AND QUANTUM SINE-GORDON SOLITONS. , 2003, , .		0
30	Inelastic neutron scattering study of the localized dynamics of protons inKHCO3single crystals. Physical Review B, 2002, 66, .	1.1	17
31	Quantum proton transfer and interconversion in the benzoic acid crystal: vibrational spectra, mechanism and theory. Chemical Physics, 2002, 276, 181-210.	0.9	50
32	The impact of vibrational spectroscopy with neutrons on our view of quantum dynamics in hydrogen bonds and proton transfer. Journal of Molecular Structure, 2002, 615, 45-59.	1.8	8
33	Structure of manganese diacetate tetrahydrate and low-temperature methyl-group dynamics. Acta Crystallographica Section B: Structural Science, 2001, 57, 36-44.	1.8	7
34	2,6-Dimethylpyrazine at 20â€…K: a neutron-diffraction study. Acta Crystallographica Section E: Structure Reports Online, 2001, 57, o1113-o1115.	0.2	0
35	2,6-Dimethylpyrazine at 5â€…K: a neutron-diffraction study. Acta Crystallographica Section E: Structure Reports Online, 2001, 57, o1116-o1117.	0.2	2
36	Inelastic neutron scattering studies of polypyrroles and partially deuterated analogues. Solid State Ionics, 2001, 145, 451-457.	1.3	3

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37	Inelastic Neutron Scattering Studies of the Proton Dynamics in Bi-Doped Manganese Oxides. Journal of the Electrochemical Society, 2000, 147, 4184.	1.3	2
38	Hydrogen bonding and quantum dynamics in the solid state. International Reviews in Physical Chemistry, 2000, 19, 553-564.	0.9	29
39	Incoherent elastic-neutron-scattering study of the vibrational dynamics and spin-related symmetry of protons in theKHCO3crystal. Physical Review B, 1999, 59, 4134-4145.	1.1	48
40	Structure and dynamics of the symmetric hydrogen bond in potassium hydrogen maleate: a neutron scattering study. Chemical Physics, 1999, 244, 387-403.	0.9	61
41	Neutron spectroscopic investigations on different grades of modified furnace blacks and gas blacks. Carbon, 1999, 37, 437-444.	5.4	26
42	Inelastic neutron scattering study of the proton dynamics in HNO3 graphite intercalation compounds. Chemical Physics, 1999, 242, 273-281.	0.9	25
43	Inelastic neutron scattering study of methyl tunnelling in an oriented single-crystal of 2,6-dimethylpyrazine at low temperature and rotationalâ€“potential calculations. Chemical Physics, 1998, 226, 1-13.	0.9	13
44	The Pauli principle and the vibrational dynamics of protons in solids: A new spin-related symmetry. Physica D: Nonlinear Phenomena, 1998, 113, 172-183.	1.3	28
45	Crystal structure and low-temperature methyl-group dynamics of cobalt and nickel acetates. Journal of Chemical Physics, 1998, 109, 9062-9074.	1.2	19
46	Inelastic-neutron-scattering study of the sine-Gordon breather interactions in isotopic mixtures of 4-methyl-pyridine. Physical Review B, 1998, 58, 11416-11419.	1.1	27
47	Inelastic neutron scattering study of proton dynamics in polyanilines. Synthetic Metals, 1996, 81, 211-214.	2.1	10
48	Inelastic neutron scattering study of proton dynamics in carbon blacks. Carbon, 1996, 34, 903-908.	5.4	27
49	The Crystal Structure and Methyl Group Dynamics in the Room-Temperature and Low-Temperature Phases of Lithium Acetate Dihydrate. Journal of Solid State Chemistry, 1996, 126, 184-188.	1.4	15
50	NH3 free rotors in Hofmann clathrates. Physica B: Condensed Matter, 1996, 226, 199-201.	1.3	7
51	Proton transfer: Recent results from neutron vibrational spectroscopy. Physica B: Condensed Matter, 1996, 226, 213-217.	1.3	5
52	Inelastic neutron scattering study of isotopic mixtures of lithium acetate with partially deuterated CH2D groups and sine-Gordon dynamics. Physica B: Condensed Matter, 1996, 226, 241-243.	1.3	6
53	Inelastic neutron-scattering study of free proton dynamics in Î³-MnO2. Chemical Physics, 1996, 209, 111-125.	0.9	12
54	Neutron Compton scattering study of proton-transfer dynamics in partially deuterated N-methylacetamide: CD3CONHCD3. Chemical Physics Letters, 1995, 240, 114-118.	1.2	13

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55	Inelastic neutron-scattering study of the proton dynamics in coals. Fuel, 1995, 74, 865-873.	3.4	31
56	Inelastic neutron scattering study of proton dynamics in Ca(OH)2 at 20 K. Chemical Physics, 1995, 197, 81-90.	0.9	14
57	Vibrational force field of solid imidazole from inelastic neutron scattering. Journal of Chemical Physics, 1995, 103, 8444-8455.	1.2	35
58	Nsutite, proton dynamics and momentum distributions. Ferroelectrics, 1995, 167, 43-51.	0.3	0
59	Inelastic neutron scattering study of free proton dynamics in coal. Journal of Non-Crystalline Solids, 1995, 188, 161-168.	1.5	22
60	Inelastic neutron-scattering study of the proton dynamics in carbons and coals. Carbon, 1994, 32, 1325-1331.	5.4	28
61	Methyl group tunnelling studies in calixarenes. Physica B: Condensed Matter, 1994, 202, 279-286.	1.3	10
62	Inelastic neutron-scattering study of methyl tunnelling and the quantum sine-Gordon breather mode in isotopic mixtures of 2,6-dimethyl-pyridine at low temperature. Physica B: Condensed Matter, 1994, 202, 302-310.	1.3	9
63	Inelastic neutron-scattering study of the proton transfer dynamics in polyglycine I at 20 K. Biophysical Chemistry, 1994, 53, 155-168.	1.5	20
64	A New Look at Proton Transfer Dynamics Along the Hydrogen Bonds in Amides and Peptides. Science, 1994, 264, 1285-1289.	6.0	130
65	Molecular tunnelling inp-tert-butylcalix[4]arene(2:1)p-xylene. Molecular Physics, 1994, 81, 609-619.	0.8	9
66	A new class of compounds suited to study the torsional dynamics in the quantum regime: the calixarenes. Chemical Physics Letters, 1993, 201, 427-432.	1.2	9
67	Inelastic neutron-scattering study of the proton dynamics in N-methylacetamide at 20 K. Chemical Physics, 1993, 176, 249-278.	0.9	54
68	Vibrational study of various crystalline phases of thallium dihydrogen phosphate TlH2PO4 and its deuterated analog TlD2PO4. Chemical Physics, 1993, 171, 203-220.	0.9	19
69	The effects of NH3 free rotation on the inelastic neutron scattering spectrum of Ni(NH3)2Ni(CN)4Â·2C6D6 at 20 K. Chemical Physics, 1993, 176, 279-287.	0.9	14
70	Rotational tunnelling and the rotational potential of methyl groups in the zinc, manganese and cobalt chloride salts of 4-methylpyridine. Molecular Physics, 1993, 80, 671-683.	0.8	0
71	Inelastic Neutron Scattering Study of the Proton Dynamics in Manganese Oxides: I . and Manganite. Journal of the Electrochemical Society, 1993, 140, 585-591.	1.3	43
72	Inelastic Neutron Scattering Study of the Proton Dynamics in Manganese Oxides: II . Proton Insertion in Electrodeposited. Journal of the Electrochemical Society, 1993, 140, 592-598.	1.3	17

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73	Inelastic Neutron Scattering Study of the Quantum Sine-Gordon Breather in 4-Methyl-Pyridine. NATO ASI Series Series B: Physics, 1993, , 465-468.	0.2	0
74	Proton-transfer dynamics in the hydrogen bond. Inelastic neutron scattering spectra of sodium, rubidium and caesium hydrogen carbonates at low temperature. Journal of Molecular Structure, 1992, 270, 339-349.	1.8	19
75	Inelastic neutron scattering study of Î³-MnO2: the dynamics of (H+)4 entities in Mn4+ vacancies. Chemical Physics, 1992, 164, 311-319.	0.9	14
76	The vibrational spectroscopy of hydrogen bonds. Physica B: Condensed Matter, 1991, 174, 246-250.	1.3	2
77	Proton-transfer dynamics in the hydrogen bond. Inelastic neutron scattering, infrared and Raman spectra of KH(CF3COO)2 and CsH(CF3COO)2. Chemical Physics, 1991, 158, 113-127.	0.9	21
78	Proton transfer dynamics in the hydrogen bond. Inelastic neutron scattering, infrared and Raman spectra of Na3H(SO4)2, K3H(SO4)2 and Rb3H(SO4)2. Chemical Physics, 1991, 154, 135-144.	0.9	60
79	An inelastic neutron scattering study of the proton dynamics in Î³-MnO2. Chemical Physics, 1991, 149, 459-469.	0.9	38
80	The anisotropy of the proton momentum distribution in KHCO3: A deep inelastic neutron scattering study. Journal of Chemical Physics, 1991, 94, 4411-4415.	1.2	37
81	Inelastic-neutron-scattering study at low temperature of the quantum sine-Gordon breather in 4-methyl-pyridine with partially deuterated methyl groups. Physical Review B, 1991, 44, 12280-12293.	1.1	46
82	Inelastic-neutron-scattering study of methyl tunneling and the quantum sine-Gordon breather in isotopic mixtures of 4-methyl-pyridine at low temperature. Physical Review B, 1990, 42, 5990-6006.	1.1	76
83	Collective rotation of methyl groups in isotopic mixtures of 4-methylpyridine at low temperature. Inelastic neutron scattering spectra. Chemical Physics Letters, 1989, 162, 188-195.	1.2	25
84	Proton dynamics in the hydrogen bond. Inelastic neutron scattering by single crystals of CsH2PO4 at 20 K. Chemical Physics, 1989, 130, 257-270.	0.9	17
85	Introduction to Vibrational Spectroscopy â€" From the Normal Mode to the Local Mode: Infrared, Raman and Inelastic Neutron Scattering. , 1989, , 79-91.		0
86	Nonlinear Coupling and Vibrational Dynamics. , 1989, , 93-102.		0
87	Neutron inelastic scattering of the methyl torsional mode in hydrogenated and deuterated 4-methylpyridine crystals at 5 K. Chemical Physics Letters, 1988, 146, 549-552.	1.2	11
88	Proton dynamics in the hydrogen bond. The inelastic neutron scattering spectrum of potassium hydrogen carbonate at 5 K. Chemical Physics, 1988, 124, 425-437.	0.9	62
89	Vibrational study of metal-substituted MPS3 layered compounds: MII1â^'xMI2xPS3 with MII = Mn, Cd, and MI = Cu (x = 0.13) or Ag (x = 0.50). Journal of Solid State Chemistry, 1988, 72, 283-292.	1.4	7
90	Rotational dynamics of the methyl group in the 4-methyl pyridine crystal. Chemical Physics Letters, 1986, 125, 41-46.	1.2	12

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91	ClH(ClD) stretching band shape analysis in isolated 1â˜1 complexes of hydrochloric acid with ethers. Chemical Physics, 1986, 106, 447-458.	0.9	4
92	Infrared band-shape analysis and hydrogen-bonding dynamics of the HCOOH low-temperature crystal. Chemical Physics, 1985, 100, 355-363.	0.9	8
93	Observation and interpretation of the fluorescence excitation spectrum of hexafluorobiacetyl under free jet expansion. Chemical Physics, 1985, 95, 293-298.	0.9	6
94	Butterfly motion of isolated perylene in its ground and first excited singlet states. Chemical Physics Letters, 1985, 114, 384-387.	1.2	24
95	Vibrational spectra and structure of N-methylacetamide in some solid complexes with neutral salts. Canadian Journal of Chemistry, 1985, 63, 1473-1476.	0.6	7
96	Interpretation of the vibrational spectra of methylglyoxal and biacetyl in their first singlet excited electronic states. Chemical Physics, 1984, 87, 117-123.	0.9	12
97	Raman OH stretching band shape of and proton dynamics in CsH2PO4. Chemical Physics, 1984, 86, 127-136.	0.9	22
98	Theoretical model for calculations of infrared and Raman band profiles of strong hydrogen bonds in ordered media. Chemical Physics, 1983, 74, 395-404.	0.9	32
99	Calculations of infrared and Raman band profiles of strong hydrogen bonds, OH stretching bands and proton dynamics in crystalline potassium hydrogen carbonate. Chemical Physics, 1983, 74, 405-412.	0.9	58
100	Vibrational spectra and dynamics of conformation and hydrogen bonding of n-methylacetamide. I. Conformational dynamics of the CH3CONHCH3 molecule and NH out of plane band splitting. Chemical Physics, 1981, 62, 275-285.	0.9	39
101	Vibrational spectra and dynamics of conformation and hydrogen bonding of N-methylacetamide. II. Dynamics of the NH...O Hydrogen bond and NH (ND) stretching band structure. Chemical Physics, 1981, 62, 287-302.	0.9	19
102	Spectroscopic study of monosubstituted amides. VII-low frequency Raman spectra of crystallized N-methylacetamide. Journal of Raman Spectroscopy, 1978, 7, 244-248.	1.2	17
103	Spectroscopic studies of the monosubstituted amides. VI. Neutron inelastic scattering spectra of N-methyl acetamide. Chemical Physics, 1977, 26, 295-300.	0.9	22
104	Structure of matrix isolated N-methylacetamide. Chemical Physics Letters, 1976, 39, 547-551.	1.2	31
105	Ã‰tude spectroscopique dâ€™amides modÃ¨les. III . â€" Spectres et conformations de deux amides substituÃ©s par des modÃ¨les de chaines latÃ©rales. Le n-isopropylacÃ©tamide et le n(1,2-dimÃ©thyl)butylamide. Journal De Chimie Physique Et De Physico-Chimie Biologique, 1975, 72, 42-50.	0.2	6