David R Klug

List of Publications by Year
in descending order

103 papers	9,305 citations	57758 44 h-index	45317 90 g-index
107 all docs	107 docs citations	107 times ranked	8525 citing authors

#	Article	IF	Citations
1	Repurposed floxacins targeting RSK4 prevent chemoresistance and metastasis in lung and bladder cancer. Science Translational Medicine, 2021, 13, .	12.4	19
2	Evaluation of FOXO1 Target Engagement Using a Single-Cell Microfluidic Platform. Analytical Chemistry, 2021, 93, 14659-14666.	6.5	5
3	Two-Dimensional Partial-Covariance Mass Spectrometry of Large Molecules Based on Fragment Correlations. Physical Review X, 2020, 10, .	8.9	9
4	A Novel AÎ²40 Assembly at Physiological Concentration. Scientific Reports, 2020, 10, 9477.	3.3	6
5	Detection of Drug Binding to a Target Protein Using EVV 2DIR Spectroscopy. Journal of Physical Chemistry B, 2019, 123, 3598-3606.	2.6	9
6	Abstract 1775: Targeting RSK4 prevents both chemoresistance and metastasis in lung cancer. , 2019, , .		2
7	Probing Synaptic Amyloid-Beta Aggregation Promoted by Copper Release. Biophysical Journal, 2018, 114, 430a.	0.5	0
8	Multiplexed single cell protein expression analysis in solid tumours using a miniaturised microfluidic assay. Convergent Science Physical Oncology, 2017, 3, 024003.	2.6	13
9	Small-molecule optical probes for cell imaging of protein sulfenylation and their application to monitor cisplatin induced protein oxidation. Sensors and Actuators B: Chemical, 2017, 248, 437-446.	7.8	3
10	Protein degradation rate is the dominant mechanism accounting for the differences in protein abundance of basal p53 in a human breast and colorectal cancer cell line. PLoS ONE, 2017, 12, e0177336.	2.5	5
11	Chemical-Free Lysis and Fractionation of Cells by Use of Surface Acoustic Waves for Sensitive Protein Assays. Analytical Chemistry, 2015, 87, 2161-2169.	6.5	34
12	Acoustic suppression of the coffee-ring effect. Soft Matter, 2015, 11, 7207-7213.	2.7	79
13	Oxygen deficient Î±-Fe₂O₃ photoelectrodes: a balance between enhanced electrical properties and trap-mediated losses. Chemical Science, 2015, 6, 4009-4016.	7.4	92
14	Identification and Relative Quantification of Tyrosine Nitration in a Model Peptide Using Two-Dimensional Infrared Spectroscopy. Journal of Physical Chemistry B, 2014, 118, 12855-12864.	2.6	16
15	Interfacial charge separation in Cu₂O/RuO_x as a visible light driven CO₂ reduction catalyst. Physical Chemistry Chemical Physics, 2014, 16, 5922-5926.	2.8	55
16	The grab-and-drop protocol: a novel strategy for membrane protein isolation and reconstitution from single cells. Analyst, The, 2014, 139, 3296-3304.	3.5	10
17	Addressable droplet microarrays for single cell protein analysis. Analyst, The, 2014, 139, 5367-5374.	3.5	13
18	Absolute quantification of protein copy number using a single-molecule-sensitive microarray. Analyst, The, 2014, 139, 3235.	3.5	19

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19	Quantitative single cell and single molecule proteomics for clinical studies. Current Opinion in Biotechnology, 2013, 24, 745-751.	6.6	33
20	Charge carrier separation in nanostructured TiO2 photoelectrodes for water splitting. Physical Chemistry Chemical Physics, 2013, 15, 8772.	2.8	58
21	Scaling advantages and constraints in miniaturized capture assays for single cell protein analysis. Lab on A Chip, 2013, 13, 2066.	6.0	25
22	Efficient Suppression of Electronâ€“Hole Recombination in Oxygen-Deficient Hydrogen-Treated TiO₂ Nanowires for Photoelectrochemical Water Splitting. Journal of Physical Chemistry C, 2013, 117, 25837-25844.	3.1	222
23	Geometry determination of complexes in a molecular liquid mixture using electronâ€“vibrationâ€“vibration two-dimensional infrared spectroscopy with a vibrational transition density cube method. Physical Chemistry Chemical Physics, 2012, 14, 14023.	2.8	13
24	Dynamics of photogenerated holes in surface modified Î±-Fe ₂ O ₃ photoanodes for solar water splitting. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 15640-15645.	7.1	413
25	Correlating long-lived photogenerated hole populations with photocurrent densities in hematite water oxidation photoanodes. Energy and Environmental Science, 2012, 5, 6304-6312.	30.8	196
26	Affinity chromatography and capillary electrophoresis for analysis of the yeast ribosomal proteins. BMB Reports, 2012, 45, 233-238.	2.4	3
27	Potential for the detection of molecular complexes and determination of interaction geometry by 2DIR: Application to protein sciences. Faraday Discussions, 2011, 150, 161.	3.2	7
28	A first step towards practical single cell proteomics: a microfluidic antibody capture chip with TIRF detection. Lab on A Chip, 2011, 11, 1256.	6.0	105
29	Mechanism of O₂ Production from Water Splitting: Nature of Charge Carriers in Nitrogen Doped Nanocrystalline TiO₂ Films and Factors Limiting O₂ Production. Journal of Physical Chemistry C, 2011, 115, 3143-3150.	3.1	123
30	Charge Carrier Dynamics on Mesoporous WO₃ during Water Splitting. Journal of Physical Chemistry Letters, 2011, 2, 1900-1903.	4.6	142
31	The Role of Cobalt Phosphate in Enhancing the Photocatalytic Activity of Î±-Fe₂O₃ toward Water Oxidation. Journal of the American Chemical Society, 2011, 133, 14868-14871.	13.7	533
32	Dynamics of photogenerated holes in nanocrystalline Î±-Fe₂O₃electrodes for water oxidation probed by transient absorption spectroscopy. Chemical Communications, 2011, 47, 716-718.	4.1	261
33	Activation Energies for the Rate-Limiting Step in Water Photooxidation by Nanostructured Î±-Fe₂O₃ and TiO₂. Journal of the American Chemical Society, 2011, 133, 10134-10140.	13.7	247
34	Generation of Simplified Protein Raman Spectra Using Three-Color Picosecond Coherent Anti-Stokes Raman Spectroscopy. Journal of Physical Chemistry B, 2010, 114, 12175-12181.	2.6	5
35	Detection of Molecular Complex Formation and Direct Determination of Intermolecular Interaction Geometries by a Hybrid Raman-Infrared Multidimensional Coherent Spectroscopy: Implications for High Throughput Biology. , 2010, , .		0
36	Water Splitting by Nanocrystalline TiO₂ in a Complete Photoelectrochemical Cell Exhibits Efficiencies Limited by Charge Recombination. Journal of Physical Chemistry C, 2010, 114, 4208-4214.	3.1	228

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37	Optical Proteomics Combining Nonlinear Electrokinetics and Coherent Two-Dimensional Infrared Spectroscopy. Biophysical Journal, 2010, 98, 17a.	0.5	0
38	Biological and Biomedical Applications of Two-Dimensional Vibrational Spectroscopy: Proteomics, Imaging, and Structural Analysis. Accounts of Chemical Research, 2009, 42, 1322-1331.	15.6	53
39	A microfluidic platform for probing single cell plasma membranes using optically trapped Smart Droplet Microtools (SDMs). Lab on A Chip, 2009, 9, 1096.	6.0	27
40	Detection of complex formation and determination of intermolecular geometry through electrical anharmonic coupling of molecular vibrations using electron-vibrationâ€“vibration two-dimensional infrared spectroscopy. Physical Chemistry Chemical Physics, 2009, 11, 8417.	2.8	27
41	Optical fingerprinting of peptides using two-dimensional infrared spectroscopy: Proof of principle. Analytical Biochemistry, 2008, 374, 358-365.	2.4	31
42	Decongestion of methylene spectra in biological and non-biological systems using picosecond 2DIR spectroscopy measuring electron-vibrationâ€“vibration coupling. Chemical Physics, 2008, 350, 201-211.	1.9	23
43	Mechanism of Photocatalytic Water Splitting in TiO₂. Reaction of Water with Photoholes, Importance of Charge Carrier Dynamics, and Evidence for Four-Hole Chemistry. Journal of the American Chemical Society, 2008, 130, 13885-13891.	13.7	850
44	Protein identification and quantification by two-dimensional infrared spectroscopy: Implications for an all-optical proteomic platform. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 15352-15357.	7.1	50
45	Direct identification and decongestion of Fermi resonances by control of pulse time ordering in two-dimensional IR spectroscopy. Journal of Chemical Physics, 2007, 127, 114513.	3.0	33
46	Comparison of basis set effects and the performance ofab initio and DFT methods for probing equilibrium fluctuations. Journal of Computational Chemistry, 2007, 28, 478-490.	3.3	19
47	Does History Repeat Itself? The Emergence of a New Discipline. ACS Chemical Biology, 2006, 1, 737-740.	3.4	0
48	A unified picture of energy and electron transfer in primary photosynthesis. Chemical Physics, 2005, 319, 308-315.	1.9	3
49	Effect of Adiabaticity on Electron Dynamics in Zinc Myoglobin. Journal of Physical Chemistry B, 2005, 109, 5954-5961.	2.6	6
50	Charge Separation versus Recombination in Dye-Sensitized Nanocrystalline Solar Cells:Â the Minimization of Kinetic Redundancy. Journal of the American Chemical Society, 2005, 127, 3456-3462.	13.7	477
51	Unfolding Energetics of G-Î±-Actin: A Discrete Intermediate can be Re-folded to the Native State by CCT. Journal of Molecular Biology, 2005, 353, 385-396.	4.2	19
52	Energy Trapping and Equilibration: A Balance of Regulation and Efficiency. Advances in Photosynthesis and Respiration, 2005, , 491-514.	1.0	7
53	A quantitative structure-function relationship for the Photosystem II reaction center: Supermolecular behavior in natural photosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 946-951.	7.1	75
54	EUV light source and laser considerations for scalability and high-energy conversion efficiency. , 2002, , .		0

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55	The Temperature Dependence of P680+ Reduction in Oxygen-Evolving Photosystem II. Biochemistry, 2002, 41, 5015-5023.	2.5	35
56	Absolute Measurement of Phosphorylation Levels in a Biological Membrane Using Atomic Force Microscopy:â€‰ The Creation of Phosphorylation Maps. Biochemistry, 2002, 41, 8535-8539.	2.5	9
57	Large and Fast Relaxations inside a Protein:Â Calculation and Measurement of Reorganization Energies in Alcohol Dehydrogenase. Journal of Physical Chemistry B, 2002, 106, 11658-11665.	2.6	86
58	Electron injection kinetics for the nanocrystalline TiO2 films sensitised with the dye (Bu4N)2Ru(dcbpyH)2(NCS)2. Chemical Physics, 2002, 285, 127-132.	1.9	95
59	Modulation of the Rate of Electron Injection in Dye-Sensitized Nanocrystalline TiO2Films by Externally Applied Bias. Journal of Physical Chemistry B, 2001, 105, 7424-7431.	2.6	171
60	Trap-limited recombination in dye-sensitized nanocrystalline metal oxide electrodes. Physical Review B, 2001, 63, .	3.2	378
61	Relationship between Excitation Energy Transfer, Trapping, and Antenna Size in Photosystem II. Biochemistry, 2001, 40, 4026-4034.	2.5	39
62	Transient luminescence studies of electron injection in dye sensitised nanocrystalline TiO2 films. Journal of Photochemistry and Photobiology A: Chemistry, 2001, 142, 215-220.	3.9	82
63	Parameters Influencing Charge Recombination Kinetics in Dye-Sensitized Nanocrystalline Titanium Dioxide Films. Journal of Physical Chemistry B, 2000, 104, 538-547.	2.6	613
64	Electron Injection and Recombination in Dye Sensitized Nanocrystalline Titanium Dioxide Films:â€‰ A Comparison of Ruthenium Bipyridyl and Porphyrin Sensitizer Dyes. Journal of Physical Chemistry B, 2000, 104, 1198-1205.	2.6	433
65	Parameters controlling electron injection kinetics in ruthenium bipyridyl dye sensitised titanium dioxide nanocrystalline films. , 2000, , .		0
66	Title is missing!. Photosynthesis Research, 1999, 60, 191-198.	2.9	7
67	Title is missing!. Photosynthesis Research, 1999, 62, 205-217.	2.9	4
68	A Quantum Mechanical/Molecular Mechanical Approach to Relaxation Dynamics:â€‰ Calculation of the Optical Properties of Solvated Bacteriochlorophyll-a. Journal of Physical Chemistry B, 1999, 103, 7720-7727.	2.6	56
69	Sensing isothermal changes in the lateral pressure in model membranes using di-pyrenyl phosphatidylcholine. Faraday Discussions, 1999, 111, 41-53.	3.2	96
70	Charge Separation in Solid-State Dye-Sensitized Heterojunction Solar Cells. Journal of the American Chemical Society, 1999, 121, 7445-7446.	13.7	195
71	Charge Recombination Kinetics in Dye-Sensitized Nanocrystalline Titanium Dioxide Films under Externally Applied Bias. Journal of Physical Chemistry B, 1998, 102, 1745-1749.	2.6	334
72	Comment on â€œMeasurement of Ultrafast Photoinduced Electron Transfer from Chemically Anchored Ruâ^'Dye Molecules into Empty Electronic States in a Colloidal Anatase TiO2Filmâ€• Journal of Physical Chemistry B, 1998, 102, 3649-3650.	2.6	114

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73	Modulation of Quantum Yield of Primary Radical Pair Formation in Photosystem II by Site-Directed Mutagenesis Affecting Radical Cations and Anions. Biochemistry, 1998, 37, 17439-17447.	2.5	87
74	Proton/Hydrogen Transfer Affects the S-State-Dependent Microsecond Phases of P680+ Reduction during Water Splitting. Biochemistry, 1998, 37, 3974-3981.	2.5	114
75	The entanglement of excitation energy transfer and electron transfer in the reaction centre of photosystem II. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 1998, 356, 449-464.	3.4	24
76	A Quantum Mechanical/Molecular Mechanical Approach to Solvation Dynamics Tested by Three Pulse Photon Echo Measurements. Springer Series in Chemical Physics, 1998, , 532-534.	0.2	2
77	The Effect of Temperature on P680+ Reduction Kinetics During Water Splitting. , 1998, , 1045-1048.		0
78	Identification of Chlorophyll Anion States During Charge Separation in Mutant Photosystem II Reaction Centres. , 1998, , 1041-1044.		2
79	Optical properties of solvated molecules calculated by a QMMM method Chlorophyll a and bacteriochlorophyll a. Faraday Discussions, 1997, 108, 51-62.	3.2	20
80	Exciton Equilibration Induced by Phonons:â€‰ Theory and Application to PS II Reaction Centers. Journal of Physical Chemistry B, 1997, 101, 7205-7210.	2.6	101
81	Sub-picosecond Equilibration of Excitation Energy in Isolated Photosystem II Reaction Centers Revisited:â€‰ Time-Dependent Anisotropy. The Journal of Physical Chemistry, 1996, 100, 10469-10478.	2.9	45
82	Subpicosecond Interfacial Charge Separation in Dye-Sensitized Nanocrystalline Titanium Dioxide Films. The Journal of Physical Chemistry, 1996, 100, 20056-20062.	2.9	815
83	Comparison of Primary Charge Separation in the Photosystem II Reaction Center Complex Isolated from Wild-type and D1-130 Mutants of the Cyanobacterium Synechocystis PCC 6803. Journal of Biological Chemistry, 1996, 271, 2093-2101.	3.4	74
84	Primary processes in isolated Photosystem II reaction centres probed by magic angle transient absorption spectroscopy. Chemical Physics, 1995, 194, 433-442.	1.9	60
85	Trapping of excitation energy by photosystem two reaction centres: Is P680 a multimer?. Solar Energy Materials and Solar Cells, 1995, 38, 135-138.	6.2	2
86	The Influence of Energy Level Disorder on the Charge Separation / Trapping Kinetics in Photosystem Two. , 1995, , 611-614.		2
87	Photoselective Excitation of P680 ?. , 1995, , 607-610.		0
88	Comparison of PS II Primary Photochemistry in Higher Plant, Synechocystis and Synechocystis Mutants. , 1995, , 615-618.		0
89	Does Slow Energy Transfer Limit the Observed Time Constant for Radical Pair Formation in Photosystem II Reaction Centers?. Biochemistry, 1994, 33, 14768-14774.	2.5	48
90	Comparison of primary electron transfer in Photosystem II reaction centres isolated from the higher plant Pisum sativum and the green alga Chlamydomonas reinhardtii. Biochimica Et Biophysica Acta - Bioenergetics, 1994, 1186, 247-251.	1.0	12

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91	A comparison of the photochemical activity of two forms of Photosystem II reaction centre isolated from sugar beet. Biochimica Et Biophysica Acta - Bioenergetics, 1994, 1185, 85-91.	1.0	1
92	Redox potentials of cytochrome b-559 in the D1/D2/cytochrome b-559 reaction centre of Photosystem II. Biochimica Et Biophysica Acta - Bioenergetics, 1993, 1143, 239-242.	1.0	12
93	Rate of oxidation of P680 in isolated photosystem 2 reaction centers monitored by loss of chlorophyll stimulated emission. Biochemistry, 1993, 32, 8259-8267.	2.5	50
94	Dephasing of excited-state wave packets in an oxazine dye. The Journal of Physical Chemistry, 1993, 97, 12561-12565.	2.9	10
95	Observation of pheophytin reduction in photosystem two reaction centers using femtosecond transient absorption spectroscopy. Biochemistry, 1992, 31, 7638-7647.	2.5	100
96	Determination of P680 singlet state lifetimes in photosystem two reaction centres. Chemical Physics Letters, 1992, 188, 54-60.	2.6	45
97	Observation of multiple radical pair states in photosystem 2 reaction centers. Biochemistry, 1991, 30, 7573-7586.	2.5	87
98	Picosecond time-resolved absorption and emission studies of pyrazolotriazole azomethine dyes. Journal of the Chemical Society, Faraday Transactions, 1991, 87, 3479.	1.7	10
99	The state of detergent solubilised light-harvesting chlorophyll-a/b protein complex as monitored by picosecond time-resolved fluorescence and circular dichroism. Biochimica Et Biophysica Acta - Bioenergetics, 1987, 893, 349-364.	1.0	110
100	Detergent effects upon the picosecond dynamics of higher-plant light-harvesting chlorophyll complex (LHC2). Journal of the Chemical Society, Faraday Transactions 2, 1986, 82, 2263.	1.1	0
101	The design of a picosecond flash spectroscope and its application to photosynthesis. Journal of the Chemical Society, Faraday Transactions 2, 1986, 82, 2111.	1.1	7
102	Picosecond fluorescence and absorption spectroscopy of light-harvesting chlorophyll-protein complex from pea chloroplasts. Biochemical Society Transactions, 1986, 14, 34-34.	3.4	3
103	Picosecond absorption spectroscopy of Photosystem I reaction centres from higher plants. Biochemical Society Transactions, 1986, 14, 47-48.	3.4	7