Carmine D'Agostino

List of Publications by Year
in descending order

74	3,639	136885 32	133188 59
papers	citations	h-index	g-index

78	78	78	4133
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Glycerol eutectics as sustainable solvent systems. Green Chemistry, 2011, 13, 82-90.	4.6	666
2	Molecular motion and ion diffusion in choline chloride based deep eutectic solvents studied by 1H pulsed field gradient NMR spectroscopy. Physical Chemistry Chemical Physics, 2011, 13, 21383.	1.3	397
3	Molecular and ionic diffusion in aqueous â€“ deep eutectic solvent mixtures: probing inter-molecular interactions using PFG NMR. Physical Chemistry Chemical Physics, 2015, 17, 15297-15304.	1.3	204
4	Solvent effects in the hydrogenation of 2-butanone. Journal of Catalysis, 2012, 289, 30-41.	3.1	140
5	Neutron diffraction, NMR and molecular dynamics study of glucose dissolved in the ionic liquid 1-ethyl-3-methylimidazolium acetate. Chemical Science, 2011, 2, 1594.	3.7	121
6	Structure and Dynamics of 1-Ethyl-3-methylimidazolium Acetate via Molecular Dynamics and Neutron Diffraction. Journal of Physical Chemistry B, 2010, 114, 7760-7768.	1.2	117
7	Mesoscopic Structuring and Dynamics of Alcohol/Water Solutions Probed by Terahertz Time-Domain Spectroscopy and Pulsed Field Gradient Nuclear Magnetic Resonance. Journal of Physical Chemistry B, 2014, 118, 10156-10166.	1.2	109
8	Interpretation of NMR Relaxation as a Tool for Characterising the Adsorption Strength of Liquids inside Porous Materials. Chemistry - A European Journal, 2014, 20, 13009-13015.	1.7	98
9	Adsorption of pyridine from aqueous solutions by polymeric adsorbents MN 200 and MN 500. Part 2: Kinetics and diffusion analysis. Chemical Engineering Journal, 2016, 306, 1223-1233.	6.6	85
10	Light-driven, heterogeneous organocatalysts for Câ€“C bond formation toward valuable perfluoroalkylated intermediates. Science Advances, 2020, 6, .	4.7	75
11	Creation of Alâ€Enriched Mesoporous ZSMâ€5 Nanoboxes with High Catalytic Activity: Converting Tetrahedral Extraâ€Framework Al into Framework Sites by Post Treatment. Angewandte Chemie - International Edition, 2020, 59, 19478-19486.	7.2	69
12	Hydrogen Bonding Network Disruption in Mesoporous Catalyst Supports Probed by PFG-NMR Diffusometry and NMR Relaxometry. Journal of Physical Chemistry C, 2012, 116, 8975-8982.	1.5	65
13	Unravelling mass transport in hierarchically porous catalysts. Journal of Materials Chemistry A, 2019, 7, 11814-11825.	5.2	57
14	Deep eutectic solvents: alternative reaction media for organic oxidation reactions. Reaction Chemistry and Engineering, 2021, 6, 582-598.	1.9	57
15	Adsorption of pyridine from aqueous solutions by polymeric adsorbents MN 200 and MN 500. Part 1: Adsorption performance and PFG-NMR studies. Chemical Engineering Journal, 2016, 306, 67-76.	6.6	52
16	Understanding the Solvent Effect on the Catalytic Oxidation of 1,4â€Butanediol in Methanol over Au/TiO₂ Catalyst: NMR Diffusion and Relaxation Studies. Chemistry - A European Journal, 2012, 18, 14426-14433.	1.7	50
17	Diffusion, Ion Pairing and Aggregation in 1â€Ethylâ€3â€Methylimidazoliumâ€Based Ionic Liquids Studied by ¹H and ¹⁹F PFG NMR: Effect of Temperature, Anion and Glucose Dissolution. ChemPhysChem, 2018, 19, 1081-1088.	1.0	50
18	Effect of solvent on the hydrogenation of 4-phenyl-2-butanone over Pt based catalysts. Journal of Catalysis, 2015, 330, 344-353.	3.1	49

#	Article	IF	Citations
19	Prediction of binary diffusion coefficients in non-ideal mixtures from NMR data: Hexaneâ€“nitrobenzene near its consolute point. Chemical Engineering Science, 2011, 66, 3898-3906.	1.9	48
20	Solvent Effect and Reactivity Trend in the Aerobic Oxidation of 1,3â€Propanediols over Gold Supported on Titania: NMR Diffusion and Relaxation Studies. Chemistry - A European Journal, 2013, 19, 11725-11732.	1.7	46
21	Assessing the surface modifications following the mechanochemical preparation of a Ag/Al₂O₃ selective catalytic reduction catalyst. Catalysis Science and Technology, 2014, 4, 531-539.	2.1	46
22	Solvent inhibition in the liquid-phase catalytic oxidation of 1,4-butanediol: understanding the catalyst behaviour from NMR relaxation time measurements. Catalysis Science and Technology, 2016, 6, 7896-7901.	2.1	46
23	Do group 1 metal salts form deep eutectic solvents?. Physical Chemistry Chemical Physics, 2016, 18, 25528-25537.	1.3	43
24	Increased Affinity of Small Gold Particles for Glycerol Oxidation over Au/TiO₂ Probed by NMR Relaxation Methods. ACS Catalysis, 2017, 7, 4235-4241.	5.5	43
25	Direct Correlation between Adsorption Energetics and Nuclear Spin Relaxation in a Liquidâ€saturated Catalyst Material. ChemPhysChem, 2018, 19, 2472-2479.	1.0	40
26	Effect of Al content on number and location of hydroxyl acid species in zeolites: a DRIFTS quantitative protocol without the need for molar extinction coefficients. RSC Advances, 2017, 7, 52604-52613.	1.7	37
27	The Effect of Grafting Zirconia and Ceria onto Alumina as a Support for Silicotungstic Acid for the Catalytic Dehydration of Glycerol to Acrolein. Chemistry - A European Journal, 2014, 20, 1743-1752.	1.7	36
28	Probing hydrogen-bonding in binary liquid mixtures with terahertz time-domain spectroscopy: a comparison of Debye and absorption analysis. Physical Chemistry Chemical Physics, 2015, 17, 5999-6008.	1.3	36
29	Pulsed-Field Gradient NMR Spectroscopic Studies of Alcohols in Supported Gold Catalysts. Journal of Physical Chemistry C, 2011, 115, 1073-1079.	1.5	35
30	In situ study of reaction kinetics using compressed sensing NMR. Chemical Communications, 2014, 50, 14137-14140.	2.2	35
31	Deactivation studies of a carbon supported AuPt nanoparticulate catalyst in the liquid-phase aerobic oxidation of 1,2-propanediol. Catalysis Science and Technology, 2014, 4, 1313-1322.	2.1	34
32	A local composition model for the prediction of mutual diffusion coefficients in binary liquid mixtures from tracer diffusion coefficients. Chemical Engineering Science, 2015, 132, 250-258.	1.9	33
33	Prediction of mutual diffusion coefficients in non-ideal mixtures from pulsed field gradient NMR data: Triethylamineâ€“water near its consolute point. Chemical Engineering Science, 2012, 74, 105-113.	1.9	32
34	Assessing the effect of reducing agents on the selective catalytic reduction of NO_x over Ag/Al₂O₃ catalysts. Catalysis Science and Technology, 2016, 6, 1661-1666.	2.1	32
35	The effect of coke deposition on the activity and selectivity of the HZSM-5 zeolite during ethylbenzene alkylation reaction in the presence of ethanol. Catalysis Science and Technology, 2014, 4, 1017.	2.1	31
36	HfN Nanoparticles: An Unexplored Catalyst for the Electrocatalytic Oxygen Evolution Reaction. Angewandte Chemie - International Edition, 2019, 58, 15464-15470.	7.2	31

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37	Prediction of the mutual diffusivity in acetoneâ€“chloroform liquid mixtures from the tracer diffusion coefficients. Chemical Engineering Science, 2013, 95, 43-47.	1.9	30
38	Structure and dynamics of aqueous 2-propanol: a THz-TDS, NMR and neutron diffraction study. Physical Chemistry Chemical Physics, 2015, 17, 30481-30491.	1.3	29
39	Effect of Al content on the strength of terminal silanol species in ZSM-5 zeolite catalysts: a quantitative DRIFTS study without the use of molar extinction coefficients. Physical Chemistry Chemical Physics, 2018, 20, 4250-4262.	1.3	28
40	Prediction of mutual diffusion coefficients in binary liquid systems with one self-associating component from viscosity data and intra-diffusion coefficients at infinite dilution. Chemical Engineering Science, 2016, 147, 118-127.	1.9	27
41	Nanoscale Clustering of Alcoholic Solutes in Deep Eutectic Solvents Studied by Nuclear Magnetic Resonance and Dynamic Light Scattering. ACS Sustainable Chemistry and Engineering, 2019, 7, 15086-15092.	3.2	26
42	Oxidative Coupling of Aldehydes with Alcohol for the Synthesis of Esters Promoted by Polystyrene-Supported N-Heterocyclic Carbene: Unraveling the Solvent Effect on the Catalyst Behavior Using NMR Relaxation. Organic Letters, 2020, 22, 4927-4931.	2.4	22
43	Tailoring pore structure and surface chemistry of microporous Alumina-Carbon Molecular Sieve Membranes (Al-CMSMs) by altering carbonization temperature for optimal gas separation performance: An investigation using low-field NMR relaxation measurements. Chemical Engineering Journal, 2021, 424, 129313.	6.6	21
44	Product Inhibition in Glycerol Oxidation over Au/TiO₂ Catalysts Quantified by NMR Relaxation. ACS Catalysis, 2018, 8, 7334-7339.	5.5	20
45	Nuclear spin relaxation as a probe of zeolite acidity: a combined NMR and TPD investigation of pyridine in HZSM-5. Physical Chemistry Chemical Physics, 2021, 23, 17752-17760.	1.3	19
46	Globular and Fibrous Proteins Modified with Deep Eutectic Solvents: Materials for Drug Delivery. Molecules, 2019, 24, 3583.	1.7	18
47	Alkaline pretreatment of walnut shells increases pore surface hydrophilicity of derived biochars. Applied Surface Science, 2022, 571, 151253.	3.1	17
48	Effect of paramagnetic species on T₁, T₂ and T₁/T₂ NMR relaxation times of liquids in porous CuSO₄/Al₂O₃. RSC Advances, 2017, 7, 36163-36167.	1.7	16
49	Mutual diffusion in concentrated liquid solutions: A new model based on cluster theory. Journal of Molecular Liquids, 2017, 232, 516-521.	2.3	15
50	A predictive model for the diffusion of a highly non-ideal ternary system. Physical Chemistry Chemical Physics, 2018, 20, 18436-18446.	1.3	15
51	Maxwellâ€“Stefan diffusion coefficient estimation for ternary systems: an ideal ternary alcohol system. Physical Chemistry Chemical Physics, 2017, 19, 16071-16077.	1.3	14
52	NMR relaxation time measurements of solvent effects in an organocatalysed asymmetric aldol reaction over silica SBA-15 supported proline. Reaction Chemistry and Engineering, 2022, 7, 269-274.	1.9	14
53	Correlating the strength of reducing agent adsorption with Ag/Al2O3 catalyst performances in selective catalytic reduction (SCR) of NOx. Catalysis Today, 2022, 384-386, 274-278.	2.2	13
54	A kinetic analysis methodology to elucidate the roles of metal, support and solvent for the hydrogenation of 4-phenyl-2-butanone over Pt/TiO2. Journal of Catalysis, 2015, 330, 362-373.	3.1	12

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55	Exploring catalyst passivation with NMR relaxation. Faraday Discussions, 2017, 204, 439-452.	1.6	12
56	Swelling-induced structural changes and microparticle uptake of gelatin gels probed by NMR and CLSM. Soft Matter, 2017, 13, 2952-2961.	1.2	12
57	Creation of Alâ€Enriched Mesoporous ZSMâ€5 Nanoboxes with High Catalytic Activity: Converting Tetrahedral Extraâ€Framework Al into Framework Sites by Post Treatment. Angewandte Chemie, 2020, 132, 19646-19654.	1.6	12
58	Tailoring morphology of hierarchical catalysts for tuning pore diffusion behaviour: a rational guideline exploiting bench-top pulsed-field gradient (PFG) nuclear magnetic resonance (NMR). Molecular Systems Design and Engineering, 2020, 5, 1193-1204.	1.7	12
59	Hole theory as a prediction tool for Brownian diffusive motion in binary mixtures of liquids. RSC Advances, 2017, 7, 51864-51869.	1.7	10
60	NMR Investigation into the Influence of Surface Interactions on Liquid Diffusion in a Mesoporous Catalyst Support. Topics in Catalysis, 2020, 63, 319-327.	1.3	10
61	HfN Nanoparticles: An Unexplored Catalyst for the Electrocatalytic Oxygen Evolution Reaction. Angewandte Chemie, 2019, 131, 15610-15616.	1.6	9
62	Solvent Effects in the Homogeneous Catalytic Reduction of Propionaldehyde with Aluminium Isopropoxide Catalyst: New Insights from PFG NMR and NMR Relaxation Studies. ChemPhysChem, 2020, 21, 1101-1106.	1.0	9
63	Inhibitory effect of oxygenated heterocyclic compounds in mesoporous catalytic materials: A pulsed-field gradient NMR diffusion study. Microporous and Mesoporous Materials, 2018, 269, 88-92.	2.2	7
64	In situ high-pressure ¹³C/¹H NMR reaction studies of benzyl alcohol oxidation over a Pd/Al₂O₃ catalyst. Reaction Chemistry and Engineering, 2020, 5, 1053-1057.	1.9	7
65	Exploiting enhanced paramagnetic NMR relaxation for monitoring catalyst preparation using T₁â€“T₂ NMR correlation maps. Reaction Chemistry and Engineering, 2019, 4, 268-272.	1.9	6
66	Self-diffusion of glycerol in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si25.svg"><mml:mrow><mml:mi>Î³</mml:mi></mml:mrow></mml:math>-alumina nanopores. The neglected role of pore saturation in the dynamics of confined polyalcohols. Applied Surface Science, 2020, 516, 146089.	3.1	6
67	23Na NMR T1 relaxation measurements as a probe for diffusion and dynamics of sodium ions in saltâ€“glycerol mixtures. Journal of Chemical Physics, 2021, 154, 224501.	1.2	6
68	Insights into Substituent Effects of Benzaldehyde Derivatives in a Heterogeneous Organocatalyzed Aldol Reaction. ChemCatChem, 2022, 14, .	1.8	6
69	Microstructure evolution during nano-emulsification by NMR and microscopy. Journal of Colloid and Interface Science, 2019, 551, 138-146.	5.0	4
70	Liquid-liquid equilibrium for the ternary system ethanol/toluene/n-decane: a correction to the existing coexistence curve and NRTL parameters. Physics and Chemistry of Liquids, 2017, 55, 669-673.	0.4	2
71	Base adsorption mechanism over zeolite catalysts at different Al contents probed by the tapered element oscillating microbalance (TEOM). Physical Chemistry Chemical Physics, 2018, 20, 25357-25364.	1.3	2
72	Assessing the use of NMR chemical shifts for prediction of VLE in non-ideal binary liquid mixtures. Chemical Engineering Science, 2014, 119, 331-333.	1.9	1

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73	Direct Correlation between Adsorption Energetics and Nuclear Spin Relaxation in a Liquid-saturated Catalyst Material. ChemPhysChem, 2018, 19, 2448-2448.	1.0	1
74	A Neutron Diffraction and Molecular Dynamics Investigation of Acetate-Based Ionic Liquids as Solvents for Glucose. ECS Transactions, 2010, 33, 611-620.	0.3	0