

Burak Atakan

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115
papers

2,550
citations

26
h-index

46
g-index

122
ext. papers

2,912
ext. citations

5
avg, IF

5.25
L-index

#	Paper	IF	Citations
115	Studies of aromatic hydrocarbon formation mechanisms in flames: Progress towards closing the fuel gap. <i>Progress in Energy and Combustion Science</i> , 2006 , 32, 247-294	33.6	410
114	On surface temperature measurements with thermographic phosphors: A review. <i>Progress in Energy and Combustion Science</i> , 2013 , 39, 37-60	33.6	224
113	Effects of a sampling quartz nozzle on the flame structure of a fuel-rich low-pressure propene flame. <i>Combustion and Flame</i> , 2000 , 121, 610-624	5.3	127
112	Temperature measurement in fuel-rich non-sooting low-pressure hydrocarbon flames. <i>Applied Physics B: Lasers and Optics</i> , 2000 , 70, 435-445	1.9	74
111	Kinetic studies of the gas-phase reactions of CN with O ₂ and H ₂ from 294 to 1000 K. <i>Chemical Physics Letters</i> , 1989 , 154, 449-453	2.5	62
110	Kinetic measurements and product branching ratio for the reaction NH ₂ +NO AT 294-1027 K. <i>Chemical Physics Letters</i> , 1989 , 155, 609-613	2.5	59
109	REMPI temperature measurement in molecular beam sampled low-pressure flames. <i>Proceedings of the Combustion Institute</i> , 2002 , 29, 2627-2633	5.9	58
108	Fuel-rich propene and acetylene flames: a comparison of their flame chemistries. <i>Combustion and Flame</i> , 2000 , 122, 483-491	5.3	54
107	Alkanes as fluids in Rankine cycles in comparison to water, benzene and toluene. <i>Energy</i> , 2012 , 45, 256-263	4.9	49
106	CVD of Al ₂ O ₃ Thin Films Using Aluminum Tri-isopropoxide. <i>Chemical Vapor Deposition</i> , 2003 , 9, 194-198		49
105	An experimental investigation of premixed fuel-rich lowpressure propene/oxygen/argon flames by laser spectroscopy and molecular-beam mass spectrometry. <i>Proceedings of the Combustion Institute</i> , 1998 , 27, 435-444		48
104	Kinetics studies of the reactions of NCO radicals with NO and O ₂ in the temperature range between 294 and 1260 K. <i>Chemical Physics Letters</i> , 1991 , 178, 157-162	2.5	46
103	An experimental study of fuel-rich 1,3-pentadiene and acetylene/propene flames. <i>Combustion and Flame</i> , 2003 , 133, 431-440	5.3	45
102	Shock-tube and plug-flow reactor study of the oxidation of fuel-rich CH ₄ /O ₂ mixtures enhanced with additives. <i>Combustion and Flame</i> , 2016 , 169, 307-320	5.3	38
101	OH laser-induced fluorescence at high pressures: spectroscopic and two-dimensional measurements exciting the A \bar{X} (1,0) transition. <i>Applied Physics B: Lasers and Optics</i> , 1997 , 64, 585-591	1.9	36
100	Thermal stability, sublimation pressures and diffusion coefficients of some metal acetylacetonates. <i>Surface and Coatings Technology</i> , 2007 , 201, 9055-9059	4.4	36
99	Combined production of power and syngas in an internal combustion engine [Experiments and simulations in SI and HCCI mode. <i>Fuel</i> , 2018 , 215, 40-45	7.1	35

98	Light emitting diode excitation of Cr ³⁺ :Al ₂ O ₃ as thermographic phosphor: experiments and measurement strategy. <i>Measurement Science and Technology</i> , 2009 , 20, 075304	2	33
97	Growth of thin aluminium oxide films on stainless steel by MOCVD at ambient pressure and by using a hot-wall CVD-setup. <i>Surface and Coatings Technology</i> , 2006 , 201, 73-81	4.4	32
96	Thermal Stability, Sublimation Pressures, and Diffusion Coefficients of Anthracene, Pyrene, and Some Metal β-Diketonates. <i>Journal of Chemical & Engineering Data</i> , 2009 , 54, 2795-2802	2.8	31
95	Kinetic studies of the reactions of CN radicals with alkanes in the temperature range between 294 and 1260 K. <i>Chemical Physics Letters</i> , 1991 , 186, 547-552	2.5	31
94	Reverse engineering of fluid selection for thermodynamic cycles with cubic equations of state, using a compression heat pump as example. <i>Energy</i> , 2015 , 81, 202-212	7.9	29
93	Diamond deposition in low-pressure acetylene flames: in situ temperature and species concentration measurements by laser diagnostics and molecular beam mass spectrometry. <i>Combustion and Flame</i> , 1999 , 118, 37-50	5.3	29
92	An experimental study of the reactions of trimethylgallium with ammonia and water over a wide temperature range. <i>Physical Chemistry Chemical Physics</i> , 1999 , 1, 5593	3.6	28
91	Power and syngas production from partial oxidation of fuel-rich methane/DME mixtures in an HCCI engine. <i>Fuel</i> , 2019 , 243, 97-103	7.1	27
90	Combined experiments to measure low sublimation pressures and diffusion coefficients of organometallic compounds. <i>Thermochimica Acta</i> , 2007 , 452, 128-134	2.9	27
89	Thermodynamic model for reciprocating compressors with the focus on fluid dependent efficiencies. <i>International Journal of Refrigeration</i> , 2017 , 84, 104-116	3.8	26
88	Organometallic vapour deposition of crystalline aluminium oxide films on stainless steel substrates. <i>Thin Solid Films</i> , 2007 , 515, 3653-3660	2.2	26
87	Contributions to the investigation of reaction pathways in fuel-rich flames. <i>Physical Chemistry Chemical Physics</i> , 2002 , 4, 2056-2062	3.6	26
86	Influence of ferrocene addition to a laminar premixed propene flame: Laser diagnostics, mass spectrometry and numerical simulations. <i>Proceedings of the Combustion Institute</i> , 2009 , 32, 445-452	5.9	25
85	Thermographic phosphor thermometry in transient combustion: A theoretical study of heat transfer and accuracy. <i>Proceedings of the Combustion Institute</i> , 2013 , 34, 3603-3610	5.9	23
84	A polygeneration process concept for HCCI-engines [Modeling product gas purification and exergy losses. <i>International Journal of Hydrogen Energy</i> , 2017 , 42, 1287-1297	6.7	22
83	Phosphorescence properties of sol-gel derived ruby measured as functions of temperature and Cr ³⁺ content. <i>Applied Physics A: Materials Science and Processing</i> , 2008 , 90, 527-532	2.6	22
82	Gas Phase Study of Systems for the CVD of Silver. <i>Chemical Vapor Deposition</i> , 2003 , 9, 144-148		22
81	Direct investigations of the kinetics of the reactions of CN radicals with N atoms and 3CH ₂ radicals with NO. <i>Proceedings of the Combustion Institute</i> , 1992 , 24, 691-699		22

80	Experimental and Numerical Investigation of Fe(CO) ₅ Addition to a Laminar Premixed Hydrogen/Oxygen/Argon Flame. <i>Zeitschrift Fur Physikalische Chemie</i> , 2009 , 223, 639-649	3.1	21
79	CVD of Thin Ruby Films on Si(100) and Stainless Steel for Surface Temperature Sensor Applications. <i>Chemical Vapor Deposition</i> , 2007 , 13, 420-426		21
78	Investigation of the partial oxidation of methane/n-heptane-mixtures and the interaction of methane and n-heptane under ultra-rich conditions. <i>Combustion and Flame</i> , 2019 , 205, 345-357	5.3	20
77	Experiments and modeling of ignition delay times, flame structure and intermediate species of EHN-doped stoichiometric n-heptane/air combustion. <i>Proceedings of the Combustion Institute</i> , 2009 , 32, 197-204	5.9	19
76	Modelling of a fuel-rich premixed propene-oxygen-argon flame and comparison with experiments. <i>Physical Chemistry Chemical Physics</i> , 2000 , 2, 4956-4961	3.6	19
75	Ruthenium complexes as precursors for chemical vapor-deposition (CVD). <i>RSC Advances</i> , 2014 , 4, 33785-33805	3.7	17
74	Activity coefficients at infinite dilution of organic solutes in the ionic liquid PEG-5 cocomonium methylsulfate at T = (313.15, 323.15, 333.15, and 343.15) K: Experimental results and COSMO-RS predictions. <i>Journal of Chemical Thermodynamics</i> , 2013 , 58, 322-329	2.9	17
73	Pumped heat electricity storage: potential analysis and orc requirements. <i>Energy Procedia</i> , 2017 , 129, 1026-1033	2.3	16
72	Sol-gel-deposition of thin TiO ₂ :Eu ³⁺ thermographic phosphor films. <i>Progress in Organic Coatings</i> , 2010 , 67, 356-360	4.8	16
71	Sol-gel Deposition of Chromium Doped Aluminium Oxide Films (Ruby) for Surface Temperature Sensor Application. <i>Chemistry of Materials</i> , 2008 , 20, 2773-2778	9.6	16
70	Growth of Thin Iron Oxide Films on Si(100) by MOCVD. <i>Journal of the Electrochemical Society</i> , 2006 , 153, C546	3.9	16
69	Laser diagnostics of NO reburning in fuel-rich propene flames. <i>Applied Physics B: Lasers and Optics</i> , 2000 , 71, 697-702	1.9	16
68	Nitrogen compounds and their influence on diamond deposition in flames. <i>Physical Chemistry Chemical Physics</i> , 1999 , 1, 705-708	3.6	16
67	Heat flux measurements in stagnation point methane/air flames with thermographic phosphors. <i>Experiments in Fluids</i> , 2010 , 49, 797-807	2.5	15
66	Unusual application of aluminium-doped ZnO thin film developed by metalorganic chemical vapour deposition for surface temperature sensor. <i>Thin Solid Films</i> , 2017 , 636, 532-536	2.2	13
65	Thermal Stability, Vapor Pressures, and Diffusion Coefficients of Some Metal 2,2,6,6-Tetramethyl-3,5-heptandionate [M(tmhd) _n] Compounds. <i>Journal of Chemical & Engineering Data</i> , 2010 , 55, 2149-2154	2.8	13
64	Sol-gel deposition of multiply doped thermographic phosphor coatings Al ₂ O ₃ :(Cr ³⁺ , M ³⁺) (M=Dy, Tm) for wide range surface temperature measurement application. <i>Progress in Organic Coatings</i> , 2010 , 67, 116-119	4.8	13
63	Minimizing the Carbon Content of Thin Ruthenium Films by MOCVD Precursor Complex Design and Process Control. <i>Chemical Vapor Deposition</i> , 2007 , 13, 389-395		13

62	Propene/isobutane mixtures in heat pumps: An experimental investigation. <i>International Journal of Refrigeration</i> , 2017 , 76, 84-96	3.8	12
61	Flame deposition of diamond films: An experimental study of the effects of stoichiometry, temperature, time and the influence of acetone. <i>Zeitschrift Fur Elektrotechnik Und Elektrochemie</i> , 1998 , 102, 906-914		12
60	Thermal Stability and Sublimation Pressures of Some Ruthenocene Compounds. <i>Materials</i> , 2010 , 3, 11723-1185	11.85	11
59	Experimental and Modelling Study of 1-Pentene Combustion at Fuel-Rich Conditions. <i>Zeitschrift Fur Physikalische Chemie</i> , 2001 , 215,	3.1	11
58	Gas turbines for polygeneration? A thermodynamic investigation of a fuel rich gas turbine cycle 2011 , 14,		11
57	Potential analysis of pumped heat electricity storages regarding thermodynamic efficiency. <i>Renewable Energy</i> , 2020 , 147, 2865-2873	8.1	11
56	Flexible energy conversion and storage via high-temperature gas-phase reactions: The piston engine as a polygeneration reactor. <i>Renewable and Sustainable Energy Reviews</i> , 2020 , 133, 110264	16.2	10
55	Methylated [(arene)(1,3-cyclohexadiene)Ru(0)] complexes as low-melting MOCVD precursor complexes with a controlled follow-up chemistry of the ligands. <i>Journal of Materials Chemistry</i> , 2011 , 21, 3014		10
54	Dy ³⁺ :Al ₂ O ₃ and (Dy ³⁺ +Cr ³⁺): Al ₂ O ₃ Films for Temperature Sensor Applications Derived by Thermal CVD and Sol-Gel Techniques. <i>ECS Transactions</i> , 2009 , 25, 1293-1300	1	10
53	Matrix-Isolation and Mass-Spectrometric Studies of the Thermolysis of [Me ₂ N(CH ₂) ₃ GaMe ₂ . Characterization of the Monomeric Organogallanes Me ₂ GaH, MeGaH ₂ , and MeGa. <i>Journal of Physical Chemistry A</i> , 2000 , 104, 3627-3634	2.8	10
52	Diamond deposition in acetylene-oxygen flames: nucleation and early growth on molybdenum substrates for different pretreatment procedures. <i>Physical Chemistry Chemical Physics</i> , 1999 , 1, 3151-3156	3.6	10
51	Partial Oxidation of Methane at Elevated Pressures and Effects of Propene and Ethane as Additive: Experiment and Simulation. <i>Zeitschrift Fur Physikalische Chemie</i> , 2015 , 229, 955-976	3.1	9
50	Gas Phase Studies of Trimethylgallium with Ammonia, Propylamine and Water at Elevated Temperatures: Towards an Understanding of GaN Growth and Oxygen Incorporation. <i>Physica Status Solidi A</i> , 1999 , 176, 719-722		9
49	Exergoeconomic analysis of an HCCI engine polygeneration process. <i>Energy Conversion and Management</i> , 2020 , 203, 112085	10.6	9
48	Compression-Expansion Processes for Chemical Energy Storage: Thermodynamic Optimization for Methane, Ethane and Hydrogen. <i>Energies</i> , 2019 , 12, 3332	3.1	8
47	NO _x conversion properties of a novel material: Iron nanoparticles stabilized in carbon. <i>Applied Catalysis B: Environmental</i> , 2015 , 166-167, 211-216	21.8	8
46	Effect of preparation of iron-infiltrated activated carbon catalysts on nitrogen oxide conversion at low temperature. <i>Applied Catalysis B: Environmental</i> , 2014 , 160-161, 641-650	21.8	8
45	Novel silica-based adsorbents with activated carbon structure. <i>Microporous and Mesoporous Materials</i> , 2015 , 210, 202-205	5.3	8

44	Methylated [(benzene)(1,3-butadiene)Ru0] Derivatives as Novel MOCVD Precursors with Favorable Properties. <i>Chemical Vapor Deposition</i> , 2011 , 17, 15-21		8
43	Sol-gel-deposition of thin TiO ₂ :Eu ³⁺ thermographic phosphor films. <i>Progress in Organic Coatings</i> , 2010 , 68, 146-150	4.8	8
42	Using the acetylacetonates of zinc and aluminium for the Metalorganic Chemical Vapour Deposition of aluminium doped zinc oxide films. <i>Materials Science in Semiconductor Processing</i> , 2015 , 39, 467-475	4.3	7
41	Deposition of hexagonal GaN using n-propylamine as a nitrogen precursor. <i>Journal of Crystal Growth</i> , 2000 , 219, 176-179	1.6	7
40	Investigations of the gas phase mechanism of diamond deposition in combustion CVD. <i>Thin Solid Films</i> , 2000 , 368, 185-192	2.2	7
39	Plug-Flow Reactor Study of the Partial Oxidation of Methane and Natural Gas at Ultra-Rich Conditions. <i>Combustion Science and Technology</i> , 2019 , 191, 1571-1584	1.5	7
38	The kinetics of methane ignition in fuel-rich HCCI engines: DME replacement by ozone. <i>Proceedings of the Combustion Institute</i> , 2021 , 38, 5567-5574	5.9	7
37	Investigation of CVD Processes to Perform Dense γ -Alumina Coating on Superalloys. <i>Journal of the Electrochemical Society</i> , 2004 , 151, C182	3.9	6
36	Poster Contributions. Double Pulse 2D LIF as a Means for Following Flow and Chemistry Development in Turbulent Combustion. <i>Zeitschrift Fur Elektrotechnik Und Elektrochemie</i> , 1993 , 97, 1706-1710		6
35	Experimental and Numerical Investigations of Ferrocene-Doped Propene Flames. <i>Zeitschrift Fur Physikalische Chemie</i> , 2011 , 225, 1179-1192	3.1	5
34	Sol-gel deposition of multiply doped thermographic phosphor coatings Al ₂ O ₃ :(Cr ³⁺ , M ³⁺) (M=Dy, Tm) for wide range surface temperature measurement application. <i>Progress in Organic Coatings</i> , 2010 , 68, 126-129	4.8	5
33	Wear properties of MOCVD-grown aluminium oxide films studied by cavitation erosion experiments. <i>Surface and Coatings Technology</i> , 2007 , 201, 9299-9303	4.4	5
32	Vapor-Liquid Equilibrium of Ferrocene in Some Organic Solvents Using Spectroscopic Methods. <i>Journal of Chemical & Engineering Data</i> , 2006 , 51, 1092-1096	2.8	5
31	Gas-phase aluminium acetylacetonate decomposition: revision of the current mechanism by VUV synchrotron radiation. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 15059-15075	3.6	5
30	Chemical vapor infiltration of activated carbon with tetramethylsilane. <i>Carbon</i> , 2014 , 79, 28-35	10.4	4
29	MOCVD-growth of thin zinc oxide films from zinc acetylacetonate and air. <i>Journal of Crystal Growth</i> , 2012 , 348, 5-9	1.6	4
28	[cis-(1,3-Diene) ₂ W(CO) ₂] Complexes as MOCVD Precursors for the Deposition of Thin Tungsten γ -Tungsten Carbide Films. <i>Chemical Vapor Deposition</i> , 2010 , 16, 239-247		4
27	The influence of pressure and equivalence ratio on the NTC behavior of methane. <i>Proceedings of the Combustion Institute</i> , 2021 , 38, 233-241	5.9	4

26	Investigation of natural gas/hydrogen mixtures for exergy storage in a piston engine. <i>Energy</i> , 2021 , 218, 119375	7.9	4
25	Pyrolysis of Methane and Ethane in a CompressionExpansion Process as a New Concept for Chemical Energy Storage: A Kinetic and Exergetic Investigation. <i>Energy Technology</i> , 2021 , 9, 2000948	3.5	4
24	Modeling study of reactive species formation from C ₁₋₃ alkanes in an HCCI engine. <i>Combustion Theory and Modelling</i> , 2019 , 23, 1119-1133	1.5	3
23	Diffusion coefficients for some organic and organometallic compounds using quartz crystal microbalance. <i>Thermochimica Acta</i> , 2012 , 532, 152-158	2.9	3
22	Chemical vapor deposition and analysis of thermally insulating ZrO ₂ layers on injection molds. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2015 , 12, 878-885		3
21	Atmospheric pressure metal-organic chemical vapor deposition (AP-MOCVD) growth of undoped and aluminium-doped ZnO thin film using hot wall reactor. <i>Surfaces and Interfaces</i> , 2021 , 22, 100883	4.1	3
20	Thermographic phosphor heat flux measurements of laminar methane/air flame impinging on a cylindrical surface. <i>Measurement Science and Technology</i> , 2019 , 30, 094003	2	2
19	Upscaling the Chemical Vapor Infiltration Process of Activated Carbon with TMS. <i>Physics Procedia</i> , 2013 , 46, 248-254		2
18	Synthesis of active carbon-based catalysts by chemical vapor infiltration for nitrogen oxide conversion. <i>Journal of Nanoscience and Nanotechnology</i> , 2011 , 11, 7956-61	1.3	2
17	Rapid Thermal (RT) MOCVD of Undoped and Al Doped ZnO Thin Films. <i>ECS Transactions</i> , 2009 , 25, 459-465		2
16	Isothermal pyrolysis investigation of aluminum diethylphosphinate mixed as a flame retardant additive into ultra-high molecular weight polyethylene. <i>Combustion and Flame</i> , 2020 , 222, 272-284	5.3	2
15	Beyond Temperature Glide: The Compressor is Key to Realizing Benefits of Zeotropic Mixtures in Heat Pumps. <i>Energy Technology</i> , 2021 , 9, 2000955	3.5	2
14	Experimental Investigation of Ethanol Oxidation and Development of a Reduced Reaction Mechanism for a Wide Temperature Range. <i>Energy & Fuels</i> , 2021 , 35, 14780-14792	4.1	2
13	Fluid Retrofit for Existing Vapor Compression Refrigeration Systems and Heat Pumps: Evaluation of Different Models. <i>Energies</i> , 2019 , 12, 2417	3.1	1
12	High-Growth-Rate Chemical Vapor Deposition of Silicon: an Experimental and Modeling Approach. <i>Zeitschrift Fur Physikalische Chemie</i> , 2005 , 219, 649-664	3.1	1
11	Dimethyl ether (DME) and dimethoxymethane (DMM) as reaction enhancers for methane: Combining flame experiments with model-assisted exploration of a polygeneration process. <i>Combustion and Flame</i> , 2022 , 237, 111863	5.3	1
10	Fuel-Rich Natural Gas Conversion in HCCI Engines with Ozone and Dimethyl Ether as Ignition Promoters: A Kinetic and Exergetic Analysis. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2022 , 47-65	0.3	1
9	Low-calorific ammonia containing off-gas mixture: Modelling the conversion in HCCI engines. <i>Combustion and Flame</i> , 2022 , 112063	5.3	1

8	Heat flux in latent thermal energy storage systems: the influence of fins, thermal conductivity and driving temperature difference. <i>Heat and Mass Transfer</i> ,1	2.2	1
7	Investigation of Mechanical, Chemical and Adsorptive Properties of Novel Silicon-Based Adsorbents with Activated Carbon Structure. <i>Journal of Carbon Research</i> , 2017 , 3, 27	3.3	0
6	Atmospheric pressure chemical vapor infiltration (CVI) for the preparation of biomorphic SiC ceramics derived from paper. <i>Journal of Nanoscience and Nanotechnology</i> , 2011 , 11, 8416-9	1.3	0
5	Aluminum Diethylphosphinate as a Flame Retardant for Polyethylene: Investigation of the Pyrolysis and Combustion Behavior of PE/ALPi-Mixtures. <i>Combustion and Flame</i> , 2022 , 240, 112006	5.3	0
4	Combined Thermogravimetric Determination of Activity Coefficients and Binary Diffusion Coefficients: A New Approach Applied to Ferrocene/n-Tetracosane Mixtures. <i>Journal of Chemical & Engineering Data</i> , 2020 , 65, 1211-1221	2.8	0
3	Concentration and temperature measurement in fuel-rich flames. <i>Comptes Rendus Physique</i> , 2001 , 2, 973-982		
2	Structural Investigation of Alumina Thin Films Deposited by Chemical Vapor Deposition. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 750, 1		
1	Insights into the decomposition of zirconium acetylacetonate using synchrotron radiation: Routes to the formation of volatile Zr-intermediates. <i>Journal of Materials Research</i> ,1	2.5	