

# Athanasios I Papadopoulos

## List of Publications by Year in descending order

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85  
papers

2,180  
citations

218381

26  
h-index

233125

45  
g-index

96  
all docs

96  
docs citations

96  
times ranked

1555  
citing authors

#	ARTICLE	IF	CITATIONS
1	EXA2PRO: A Framework for High Development Productivity on Heterogeneous Computing Systems. IEEE Transactions on Parallel and Distributed Systems, 2022, 33, 792-804.	4.0	4
2	Thermo-economic and environmental assessment of hybrid vapor compression-absorption refrigeration systems for district cooling. Energy, 2022, 243, 122991.	4.5	24
3	Cascaded model predictive controller performance for the selection of robust working fluids in absorption refrigeration cycles. Applied Thermal Engineering, 2022, 206, 118038.	3.0	4
4	A new correlation for performance prediction of small and large capacity single-effect vapor absorption refrigeration systems. , 2022, 1, 100002.		6
5	Approximate computing, skeleton programming and run-time scheduling in an algorithm for process design and controllability in distributed and heterogeneous infrastructures. Computers and Chemical Engineering, 2022, 164, 107874.	2.0	1
6	Pilot scale assessment of a novel phase-change solvent for energy efficient post-combustion CO2 capture. Journal of Environmental Management, 2022, 317, 115489.	3.8	4
7	Environmental, health and safety assessment of post-combustion CO2 capture processes with phase-change solvents. Sustainable Production and Consumption, 2021, 25, 60-76.	5.7	18
8	Molecular engineering of sustainable phase-change solvents: From digital design to scaling-up for CO2 capture. Chemical Engineering Journal, 2021, 420, 127624.	6.6	15
9	Techno-economic assessment of novel and conventional working fluid mixtures for <sc>two-stage</sc> double-effect and triple-effect absorption refrigeration systems. International Journal of Energy Research, 2021, 45, 12784-12805.	2.2	3
10	Integrated Design of Working Fluid Mixtures and Absorption Refrigeration Cycles. Frontiers in Chemical Engineering, 2021, 3, .	1.3	1
11	Systematic assessment of the dynamic behavior of ecofriendly refrigerants used in dual vapor compression chiller. Science and Technology for the Built Environment, 2021, 27, 917-935.	0.8	2
12	Sustainable design, integration, and operation for energy high-performance process systems. Energy, 2021, 224, 120158.	4.5	45
13	Experimental investigation of phase change amine solutions used in CO2 capture applications: Systems with dimethylcyclohexylamine (DMCA) and N cyclohexyl-1,3-propanediamine (CHAP) or 3-methylaminopropylamine (MAPA). International Journal of Greenhouse Gas Control, 2021, 109, 103353.	2.3	5
14	Modified Operating Parameter-Based Iyer Correlation for the Coefficient of Performance (COP) Prediction of Different Fluid Pairs in Double-Effect Vapor Absorption Refrigeration (VAR) Cycles. , 2021, , .		0
15	CO2 Solubility in diethylenetriamine (DETA) and triethylenetetramine (TETA) aqueous mixtures: Experimental investigation and correlation using the CPA equation of state. Chemical Thermodynamics and Thermal Analysis, 2021, 3-4, 100017.	0.7	4
16	A review of research facilities, pilot and commercial plants for solvent-based post-combustion CO2 capture: Packed bed, phase-change and rotating processes. International Journal of Greenhouse Gas Control, 2021, 111, 103474.	2.3	28
17	Optimum design of industrial post-combustion CO2 capture processes using phase-change solvents. Chemical Engineering Research and Design, 2021, 175, 209-222.	2.7	14
18	Comparative Energy and Exergy Analysis of Large Capacity Ammonia-Water and Water-Lithium Bromide Vapor Absorption Refrigeration (VAR) Cycles. , 2021, , .		1

#	ARTICLE	IF	CITATIONS
19	Thermodynamic, Environmental and Cost Evaluation of Compression-Absorption Parallel and Cascade Refrigeration Chiller. , 2021, , .		0
20	Reinforcement learning based adaptive power pinch analysis for energy management of stand-alone hybrid energy storage systems considering uncertainty. Energy, 2020, 193, 116622.	4.5	34
21	Systematic assessment of working fluid mixtures for absorption refrigeration based on techno-economic, environmental, health and safety performance. Energy Conversion and Management, 2020, 223, 113262.	4.4	12
22	Efficient selection of conventional and phase-change CO <sub>2</sub> capture solvents and mixtures based on process economic and operating criteria. Journal of Cleaner Production, 2020, 272, 122764.	4.6	6
23	Dynamic modelling and control of single, double and triple effect absorption refrigeration cycles. Energy, 2020, 210, 118529.	4.5	13
24	Off-Design Operation of Conventional and Phase-Change CO <sub>2</sub> Capture Solvents and Mixtures: A Systematic Assessment Approach. Applied Sciences (Switzerland), 2020, 10, 5316.	1.3	4
25	Review on Modeling of Vapor Compression Chillers: District Cooling Perspective. International Journal of Air-Conditioning and Refrigeration, 2020, 28, 2030003.	0.8	7
26	Investigation of binary, ternary and quaternary mixtures across solution heat exchanger used in absorption refrigeration and process modifications to improve cycle performance. Energy, 2020, 198, 117254.	4.5	11
27	An approach for simultaneous computer-aided molecular design with holistic sustainability assessment: Application to phase-change CO <sub>2</sub> capture solvents. Computers and Chemical Engineering, 2020, 135, 106769.	2.0	31
28	Probabilistic adaptive model predictive power pinch analysis (PoPA) energy management approach to uncertainty. Journal of Engineering, 2019, 2019, 4288-4292.	0.6	1
29	Experimental measurement and assessment of equilibrium behaviour for phase change solvents used in CO <sub>2</sub> capture. Chemical Engineering Science, 2019, 199, 20-27.	1.9	29
30	Systematic modeling under uncertainty of single, double and triple effect absorption refrigeration processes. Energy, 2019, 183, 262-278.	4.5	13
31	Absorption refrigeration processes with organic working fluid mixtures- a review. Renewable and Sustainable Energy Reviews, 2019, 109, 239-270.	8.2	41
32	Phase-Change Solvents and Processes for Postcombustion CO <sub>2</sub> Capture: A Detailed Review. Industrial & Engineering Chemistry Research, 2019, 58, 5088-5111.	1.8	61
33	A Framework for the Integration of Holistic Sustainability Assessment in Computer-Aided Molecular Design. Computer Aided Chemical Engineering, 2019, 46, 13-18.	0.3	2
34	Optimal design of post combustion CO <sub>2</sub> capture processes based on phase-change solvents. Computer Aided Chemical Engineering, 2019, , 463-468.	0.3	4
35	Solvent effects on design with operability considerations in post-combustion CO <sub>2</sub> capture plants. Chemical Engineering Research and Design, 2018, 131, 414-429.	2.7	10
36	EXA2PRO programming environment. , 2018, , .		1

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37	Adaptive Power Pinch Analysis for Energy management of Hybrid Energy Storage Systems. , 2018, , .		0
38	Computer-Aided Molecular Design: Fundamentals, Methods, and Applications. , 2018, , .		19
39	Sustainability assessment using local lazy learning: The case of post-combustion CO <sub>2</sub> capture solvents. Computer Aided Chemical Engineering, 2018, , 823-828.	0.3	2
40	A systems approach for management of microgrids considering multiple energy carriers, stochastic loads, forecasting and demand side response. Applied Energy, 2018, 226, 546-559.	5.1	44
41	A framework for the integration of solvent and process design with controllability assessment. Chemical Engineering Science, 2017, 159, 154-176.	1.9	16
42	Organic Rankine Cycle system performance targeting and design for multiple heat sources with simultaneous working fluid selection. Journal of Cleaner Production, 2017, 142, 1950-1970.	4.6	37
43	Screening of Solvents for CO <sub>2</sub> Capture considering Sustainability Criteria via Data Envelopment Analysis. Computer Aided Chemical Engineering, 2017, , 2011-2016.	0.3	0
44	Targeting and Design of Organic Rankine Cycle Systems for Multiple Heat Sources with Simultaneous Working Fluid Selection. Computer Aided Chemical Engineering, 2017, 40, 769-774.	0.3	1
45	The Impact of Novel and Conventional Working Fluids on the Control Performance in Organic Rankine Cycles. Computer Aided Chemical Engineering, 2017, , 2443-2448.	0.3	5
46	Integrated Multiobjective Molecular and Process Design. Computer Aided Chemical Engineering, 2016, 39, 269-313.	0.3	1
47	Systematic selection of amine mixtures as post-combustion CO <sub>2</sub> capture solvent candidates. Journal of Cleaner Production, 2016, 136, 159-175.	4.6	29
48	Power grand composite curves shaping for adaptive energy management of hybrid microgrids. Renewable Energy, 2016, 95, 433-448.	4.3	12
49	Computer-aided molecular design and selection of CO <sub>2</sub> capture solvents based on thermodynamics, reactivity and sustainability. Molecular Systems Design and Engineering, 2016, 1, 313-334.	1.7	56
50	Multi-criteria screening of chemicals considering thermodynamic and life cycle assessment metrics via data envelopment analysis: application to CO <sub>2</sub> capture. Green Chemistry, 2016, 18, 6468-6481.	4.6	33
51	Enhancement of hybrid renewable energy systems control with neural networks applied to weather forecasting: the case of Olvio. Neural Computing and Applications, 2016, 27, 1093-1118.	3.2	9
52	Process flowsheet design optimization for various amine-based solvents in post-combustion CO <sub>2</sub> capture plants. Journal of Cleaner Production, 2016, 111, 204-216.	4.6	55
53	Systematic Methods for Working Fluid Selection and the Design, Integration and Control of Organic Rankine Cycles—A Review. Energies, 2015, 8, 4755-4801.	1.6	110
54	Adaptive Management of Renewable Energy Smart Grids Using a Power Grand Composite Curves Approach. Computer Aided Chemical Engineering, 2015, , 2411-2416.	0.3	1

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55	An Integrated Framework for Controllability Assessment and Solvent Selection in Post-Combustion CO <sub>2</sub> Capture Processes. <i>Computer Aided Chemical Engineering</i> , 2015, 37, 1247-1252.	0.3	0
56	Selection of working fluid mixtures for flexible Organic Rankine Cycles under operating variability through a systematic nonlinear sensitivity analysis approach. <i>Applied Thermal Engineering</i> , 2015, 89, 1054-1067.	3.0	38
57	Toward Sustainable Solvent-Based Postcombustion CO <sub>2</sub> Capture. <i>Computer Aided Chemical Engineering</i> , 2015, , 279-310.	0.3	20
58	A power grand composite curves approach for analysis and adaptive operation of renewable energy smart grids. <i>Clean Technologies and Environmental Policy</i> , 2015, 17, 1171-1193.	2.1	18
59	Novel and conventional working fluid mixtures for solar Rankine cycles: Performance assessment and multi-criteria selection. <i>Applied Thermal Engineering</i> , 2015, 75, 384-396.	3.0	49
60	Design of Multi-pressure Organic Rankine Cycles for Waste Heat Recovery in Site Utility Systems. <i>Computer Aided Chemical Engineering</i> , 2014, 33, 109-114.	0.3	0
61	An exergy composite curves approach for the design of optimum multi-pressure organic Rankine cycle processes. <i>Energy</i> , 2014, 69, 285-298.	4.5	51
62	Optimum synthesis of solvent-based post-combustion CO <sub>2</sub> capture flowsheets through a generalized modeling framework. <i>Clean Technologies and Environmental Policy</i> , 2014, 16, 1363-1380.	2.1	34
63	Application of Neural Networks Solar Radiation Prediction for Hybrid Renewable Energy Systems. <i>Communications in Computer and Information Science</i> , 2014, , 133-144.	0.4	1
64	Toward Optimum Working Fluid Mixtures for Organic Rankine Cycles using Molecular Design and Sensitivity Analysis. <i>Industrial &amp; Engineering Chemistry Research</i> , 2013, 52, 12116-12133.	1.8	111
65	Molecular Design of Working Fluid Mixtures for Organic Rankine Cycles. <i>Computer Aided Chemical Engineering</i> , 2013, 32, 289-294.	0.3	11
66	Performance investigation of a hybrid renewable power generation and storage system using systemic power management models. <i>Energy</i> , 2013, 61, 621-635.	4.5	46
67	Automation for a sustainable food industry: computer aided analysis and control engineering methods. , 2013, , 441-485.		2
68	Multi-level Design and Selection of Optimum Working Fluids and ORC Systems for Power and Heat Cogeneration from Low Enthalpy Renewable Sources. <i>Computer Aided Chemical Engineering</i> , 2012, , 66-70.	0.3	21
69	Efficient Design under Uncertainty of Renewable Power Generation Systems Using Partitioning and Regression in the Course of Optimization. <i>Industrial &amp; Engineering Chemistry Research</i> , 2012, 51, 12862-12876.	1.8	8
70	Homotopy Continuation Solution Method in Nonlinear Model Predictive Control Applications. <i>Computer Aided Chemical Engineering</i> , 2012, 30, 1327-1331.	0.3	1
71	On the role of working fluid properties in Organic Rankine Cycle performance. <i>Applied Thermal Engineering</i> , 2012, 36, 406-413.	3.0	122
72	A data mining approach for efficient systems optimization under uncertainty using stochastic search methods. <i>Computer Aided Chemical Engineering</i> , 2011, 29, 311-315.	0.3	1

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73	Optimum design and operation under uncertainty of power systems using renewable energy sources and hydrogen storage. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 872-891.	3.8	131
74	On the systematic design and selection of optimal working fluids for Organic Rankine Cycles. <i>Applied Thermal Engineering</i> , 2010, 30, 760-769.	3.0	335
75	A Framework for Solvent Selection Based on Optimal Separation Process Design and Controllability Properties. <i>Computer Aided Chemical Engineering</i> , 2009, 26, 177-181.	0.3	10
76	Integrated solvent and process selection for separation and reactive separation systems. <i>Chemical Engineering and Processing: Process Intensification</i> , 2009, 48, 1047-1060.	1.8	42
77	Generic modelling, design and optimization of industrial phosphoric acid production processes. <i>Chemical Engineering and Processing: Process Intensification</i> , 2009, 48, 493-506.	1.8	21
78	A decision support grid for integrated molecular solvent design and chemical process selection. <i>Computers and Chemical Engineering</i> , 2009, 33, 72-87.	2.0	14
79	Design of Cost Optimal and Environmentally Conscious Phosphoric Acid Production Processes under Uncertainty. <i>Chemical Product and Process Modeling</i> , 2008, 3, .	0.5	2
80	A generic framework for modeling, design and optimization of industrial phosphoric acid production processes. <i>Computer Aided Chemical Engineering</i> , 2008, , 1149-1154.	0.3	1
81	Efficient integration of optimal solvent and process design using molecular clustering. <i>Chemical Engineering Science</i> , 2006, 61, 6316-6336.	1.9	59
82	Multiobjective molecular design for integrated process-solvent systems synthesis. <i>AIChE Journal</i> , 2006, 52, 1057-1070.	1.8	97
83	Integrated design of optimal processes and molecules: A framework for solvent-based separation and reactive-separation systems. <i>Computer Aided Chemical Engineering</i> , 2005, 20, 1645-1650.	0.3	0
84	On the integrated design of solvents and processes using a decomposition based approach. <i>Computer Aided Chemical Engineering</i> , 2004, , 259-264.	0.3	1
85	On the synthesis and optimization of liquid-liquid extraction processes using stochastic search methods. <i>Computers and Chemical Engineering</i> , 2004, 28, 2391-2406.	2.0	33