

# Tuomo Sainio

## List of Publications by Year in descending order

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75  
papers

1,274  
citations

361296

20  
h-index

434063

31  
g-index

75  
all docs

75  
docs citations

75  
times ranked

1185  
citing authors

#	ARTICLE	IF	CITATIONS
1	Adsorption of Ni <sup>2+</sup> , Cd <sup>2+</sup> , PO <sub>4</sub> <sup>3-</sup> and NO <sub>3</sub> <sup>-</sup> from aqueous solutions by nanostructured microfibrillated cellulose modified with carbonated hydroxyapatite. <i>Chemical Engineering Journal</i> , 2014, 252, 64-74.	6.6	114
2	Adsorptive removal of fermentation inhibitors from concentrated acid hydrolyzates of lignocellulosic biomass. <i>Bioresource Technology</i> , 2011, 102, 6048-6057.	4.8	76
3	Enhanced membrane filtration of wood hydrolysates for hemicelluloses recovery by pretreatment with polymeric adsorbents. <i>Bioresource Technology</i> , 2013, 143, 275-281.	4.8	47
4	Recovering rare earth elements from phosphogypsum using a resin-in-leach process: Selection of resin, leaching agent, and eluent. <i>Hydrometallurgy</i> , 2019, 189, 105125.	1.8	45
5	Analysis of steady state recycling chromatography using equilibrium theory. <i>Separation and Purification Technology</i> , 2009, 66, 9-18.	3.9	41
6	Chromatographic Recovery of Monosaccharides for the Production of Bioethanol from Wood. <i>Industrial &amp; Engineering Chemistry Research</i> , 2010, 49, 2907-2915.	1.8	40
7	Ethanol production from wood via concentrated acid hydrolysis, chromatographic separation, and fermentation. <i>Journal of Chemical Technology and Biotechnology</i> , 2012, 87, 689-696.	1.6	38
8	Ion exchange recovery of rhenium from industrially relevant sulfate solutions: Single column separations and modeling. <i>Hydrometallurgy</i> , 2015, 158, 74-82.	1.8	37
9	Adiabatic operation of chromatographic fixed-bed reactors. <i>Chemical Engineering Journal</i> , 2011, 168, 861-871.	6.6	34
10	Purification process for recovering hydroxy acids from soda black liquor. <i>Chemical Engineering Research and Design</i> , 2013, 91, 2765-2774.	2.7	34
11	Unified design of chromatographic separation processes. <i>Chemical Engineering Science</i> , 2015, 122, 436-451.	1.9	33
12	Production and recovery of monosaccharides from lignocellulose hot water extracts in a pulp mill biorefinery. <i>Bioresource Technology</i> , 2013, 135, 730-737.	4.8	30
13	Effect of porogen solvent on the properties of nickel ion imprinted polymer materials prepared by inverse suspension polymerization. <i>European Polymer Journal</i> , 2017, 87, 124-135.	2.6	30
14	Theoretical analysis of steady state recycling chromatography with solvent removal. <i>Separation and Purification Technology</i> , 2011, 78, 21-32.	3.9	25
15	Modeling of chromatographic separation of concentrated-acid hydrolysates. <i>Separation and Purification Technology</i> , 2011, 80, 610-619.	3.9	25
16	Explicit equations for the height and position of the first component shock for binary mixtures with competitive Langmuir isotherms under ideal conditions. <i>Journal of Chromatography A</i> , 2011, 1218, 6379-6387.	1.8	22
17	Polyacrylonitrile-encapsulated amorphous zirconium phosphate composite adsorbent for Co, Nd and Dy separations. <i>Chemical Engineering Journal</i> , 2018, 351, 832-840.	6.6	22
18	Separation and recovery of lignin from hydrolysates of lignocellulose with a polymeric adsorbent. <i>Separation and Purification Technology</i> , 2017, 186, 125-134.	3.9	22

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19	Use of Adsorbed Solution theory to model competitive and co-operative sorption on elastic ion exchange resins. <i>Separation and Purification Technology</i> , 2012, 95, 235-247.	3.9	21
20	Recovery of $\text{ReO}_4^-$ by weakly basic anion exchangers: Modeling of sorption equilibrium and rate. <i>Separation and Purification Technology</i> , 2015, 153, 19-28.	3.9	21
21	Effect of template ion–ligand complex stoichiometry on selectivity of ion-imprinted polymers. <i>Talanta</i> , 2015, 134, 538-545.	2.9	21
22	Numerical simulation of counter-current liquid–liquid extraction for recovering Co, Ni and Li from lithium-ion battery leachates of varying composition. <i>Separation and Purification Technology</i> , 2019, 210, 530-540.	3.9	21
23	Phase equilibria in solvent mixture–ion exchange resin catalyst systems. <i>Fluid Phase Equilibria</i> , 2004, 218, 269-283.	1.4	20
24	Modelling and performance evaluation of chromatographic monosaccharide recovery from concentrated acid lignocellulosic hydrolysates. <i>Journal of Chemical Technology and Biotechnology</i> , 2012, 87, 1676-1686.	1.6	20
25	Chromatographic recovery and purification of natural phytochemicals from underappreciated willow bark water extracts. <i>Separation and Purification Technology</i> , 2021, 261, 118247.	3.9	19
26	Electrolyte exclusion chromatography using a multi-column recycling process: Fractionation of concentrated acid lignocellulosic hydrolysate. <i>Separation and Purification Technology</i> , 2014, 129, 137-149.	3.9	18
27	Design of bypass-simulated moving bed chromatography for reduced purity requirements. <i>Chemical Engineering Science</i> , 2019, 205, 401-413.	1.9	17
28	Modeling of adsorptive removal of benzalkonium chloride from water with a polymeric adsorbent. <i>Separation and Purification Technology</i> , 2009, 69, 185-194.	3.9	16
29	Modeling the phase equilibrium in liquid–liquid extraction of copper over a wide range of copper and hydroxyoxime extractant concentrations. <i>Chemical Engineering Science</i> , 2017, 171, 88-99.	1.9	15
30	Recovery of valuable metals from argon oxygen decarburization (AOD) dusts by leaching, filtration and solvent extraction. <i>Hydrometallurgy</i> , 2013, 140, 181-189.	1.8	14
31	Comparison of ion exchange process configurations for arsenic removal from natural waters. <i>Desalination and Water Treatment</i> , 2016, 57, 13770-13781.	1.0	14
32	Ion exchange in complexing media – Nickel removal from ammoniacal ammonium sulfate solutions. <i>Chemical Engineering Journal</i> , 2019, 373, 831-839.	6.6	14
33	Selective acid leaching of rare earth elements from roasted NdFeB magnets. <i>Separation and Purification Technology</i> , 2021, 278, 119571.	3.9	14
34	Novel chromatographic process for the recovery and purification of hydroxy acids from alkaline spent pulping liquors. <i>Chemical Engineering Science</i> , 2019, 197, 87-97.	1.9	13
35	Adsorption of cationic surfactants on a neutral polymer adsorbent: Investigation of the interactions by using mathematical modeling. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2010, 358, 57-67.	2.3	12
36	Steady state recycling chromatography with an integrated solvent removal unit – Separation of glucose and galactose. <i>Journal of Chromatography A</i> , 2012, 1251, 122-133.	1.8	12

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37	Evolutionary multi-objective optimization based comparison of multi-column chromatographic separation processes for a ternary separation. <i>Journal of Chromatography A</i> , 2014, 1358, 181-191.	1.8	12
38	Chromatographic separation of ethyl- $\beta$ -D-glucopyranoside and D-glucose with steady-state recycling chromatography. <i>Separation and Purification Technology</i> , 2016, 169, 262-272.	3.9	12
39	Effect of separation material particle size on pressure drop and process efficiency in continuous chromatographic separation of glucose and fructose. <i>Separation and Purification Technology</i> , 2018, 193, 317-326.	3.9	12
40	Size-exclusion chromatographic separation of hydroxy acids and sodium hydroxide in spent pulping liquor. <i>Separation and Purification Technology</i> , 2013, 118, 234-241.	3.9	11
41	Nickel retention by an ion-imprinted polymer: Wide-range selectivity study and modelling of the binding structures. <i>Chemical Engineering Journal</i> , 2016, 304, 20-28.	6.6	11
42	Co-eluent effect in partition chromatography. Rhamnose-xylene separation with strong and weak cation-exchangers in aqueous ethanol. <i>Journal of Chromatography A</i> , 2002, 982, 69-84.	1.8	10
43	Intensification of metal extraction with high-shear mixing. <i>Chemical Engineering and Processing: Process Intensification</i> , 2013, 73, 119-128.	1.8	10
44	Adsorption of Bisphenol A from Water-Ethanol Mixtures on Pulverized Activated Carbon. <i>Separation Science and Technology</i> , 2014, 49, 763-772.	1.3	10
45	Steady state recycling chromatography with solvent removal—Effect of solvent removal constraints on process operation under ideal conditions. <i>Journal of Chromatography A</i> , 2014, 1341, 15-30.	1.8	10
46	Acid hydrolysis of glycosidic bonds in oat $\beta$ -glucan and development of a structured kinetic model. <i>AIChE Journal</i> , 2018, 64, 2570-2580.	1.8	10
47	Montmorillonite-anchored magnetite nanocomposite for recovery of ammonium from stormwater and its reuse in adsorption of Sc <sup>3+</sup> . <i>Nanotechnology for Environmental Engineering</i> , 2021, 6, 1.	2.0	9
48	Design of batch chromatography for separation of binary mixtures under reduced purity requirements. <i>Journal of Chromatography A</i> , 2013, 1286, 55-68.	1.8	8
49	Complexation of Nickel with 2-(Aminomethyl)pyridine at High Zinc Concentrations or in a Nonaqueous Solvent Mixture. <i>Journal of Chemical &amp; Engineering Data</i> , 2014, 59, 2207-2214.	1.0	8
50	Robustness of steady state recycling chromatography with an integrated solvent removal unit. <i>Journal of Chromatography A</i> , 2015, 1391, 31-39.	1.8	8
51	Chromatographic fractionation of complex mixtures of hydroxy carboxylic acids. <i>Separation and Purification Technology</i> , 2019, 221, 349-362.	3.9	8
52	Evolution of the molar mass distribution of oat $\beta$ -glucan during acid catalyzed hydrolysis in aqueous solution. <i>Chemical Engineering Journal</i> , 2020, 382, 122863.	6.6	8
53	Continuous ion exchange for hydrometallurgy: Purification of Ag(I) from NaCl from divalent metals with aminomethylphosphonic resin using counter-current and cross-current operation. <i>Hydrometallurgy</i> , 2014, 142, 84-93.	1.8	7
54	Unified Design of chromatographic processes with timed events: Separation of ternary mixtures. <i>Chemical Engineering Science</i> , 2016, 152, 547-567.	1.9	7

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55	Bypass chromatography – design and analysis of an improved strategy for operating batch chromatography processes. <i>Journal of Chromatography A</i> , 2012, 1230, 77-92.	1.8	6
56	Moment based weighted residual method – New numerical tool for a nonlinear multicomponent chromatographic general rate model. <i>Computers and Chemical Engineering</i> , 2013, 53, 153-163.	2.0	6
57	In situ complexation versus complex isolation in synthesis of ion imprinted polymers. <i>Reactive and Functional Polymers</i> , 2018, 122, 1-8.	2.0	6
58	Chromatographic fractionation of a ternary mixture with an SMB cascade process: The effect of ion exchange resin cross-linkage on separation efficiency. <i>Separation and Purification Technology</i> , 2018, 206, 286-296.	3.9	6
59	Steady-state recycling chromatography in the purification of weakly acidic lignocellulosic hydrolysates. <i>Separation and Purification Technology</i> , 2019, 210, 670-681.	3.9	6
60	Controlled partial neutralization of amphoteric ion exchange resin for improved metals separation. <i>Reactive and Functional Polymers</i> , 2013, 73, 647-652.	2.0	5
61	Recovery of metal oxoanions from basic solutions using cooperative sorption – Separation of Na <sub>2</sub> MoO <sub>4</sub> and NaOH. <i>Chemical Engineering Journal</i> , 2018, 341, 578-587.	6.6	5
62	Chromatographic Recovery of Monosaccharides and Lignin from Lignocellulosic Hydrolysates. <i>Chemical Engineering and Technology</i> , 2018, 41, 2402-2410.	0.9	5
63	Ion exchange purification of a silver nitrate electrolyte. <i>Minerals Engineering</i> , 2019, 132, 175-182.	1.8	5
64	Intermittent recycle-integrated reactor-separator for production of well-defined non-digestible oligosaccharides from oat β <sup>2</sup> -glucan. <i>Chemical Engineering Journal</i> , 2021, 410, 128352.	6.6	5
65	A new moment analysis method to estimate the characteristic parameters in chromatographic general rate model. <i>Computers and Chemical Engineering</i> , 2013, 55, 50-60.	2.0	4
66	Chromatographic Fractionation of Lignocellulosic Hydrolysates. <i>Advances in Chemical Engineering</i> , 2013, 42, 261-349.	0.5	4
67	Synthesis of hydrometallurgical processes for valorization of secondary raw materials using ant colony optimization and key performance indicators. <i>Hydrometallurgy</i> , 2015, 153, 121-133.	1.8	4
68	Liquid–liquid synthesis of oximes from carbonyl compounds: formation under neutral conditions and degradation at acidic hydrometallurgical process conditions. <i>Journal of Chemical Technology and Biotechnology</i> , 2017, 92, 1446-1453.	1.6	4
69	Analysis of reactor–separator processes for polymeric and oligomeric degradation products with controlled molar mass distributions. <i>Chemical Engineering Science</i> , 2021, 229, 116154.	1.9	4
70	Cooperative sorption of weak and strong electrolytes in microporous adsorbents. <i>Microporous and Mesoporous Materials</i> , 2017, 239, 86-95.	2.2	3
71	Modeling the liquid–liquid extraction equilibrium of iron (III) with hydroxyoxime extractant and equilibrium-based simulation of counter-current copper extraction circuits. <i>Chemical Engineering Science</i> , 2018, 175, 267-277.	1.9	3
72	Modelling of chromatographic carboxylic acid fractionation with a strong anion exchange resin in sulfate form. <i>Separation and Purification Technology</i> , 2022, 285, 120320.	3.9	3

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73	Performance evaluation of a recycle-integrated process for the production and purification of monosaccharides from lignocellulosic biomass. <i>Separation and Purification Technology</i> , 2015, 156, 561-571.	3.9	2
74	Sorption of Ampholytes in Weakly Acidic Ion Exchangers: Effect of Resin Ionic Form on Betaine Uptake. <i>Solvent Extraction and Ion Exchange</i> , 2012, 30, 388-397.	0.8	0
75	Unified design of chromatographic separation processes: Partial separations and waste fractions. <i>Chemical Engineering Science</i> , 2021, 234, 116457.	1.9	0