

Anton Alexandru Kiss

List of Publications by Year in descending order

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158
papers

7,099
citations

57719

44
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60583

81
g-index

164
all docs

164
docs citations

164
times ranked

4041
citing authors

#	ARTICLE	IF	CITATIONS
1	Novel Eco-Efficient Process for Methyl Methacrylate Production. Industrial & Engineering Chemistry Research, 2021, 60, 1290-1301.	1.8	8
2	The Manchester perspective on using the Design Project to enhance the education of chemical engineering students. Journal of Chemical Technology and Biotechnology, 2021, 96, 1453-1464.	1.6	4
3	Novel pervaporation-assisted pressure swing reactive distillation process for intensified synthesis of dimethyl carbonate. Chemical Engineering and Processing: Process Intensification, 2021, 162, 108358.	1.8	13
4	Enhancing the Separation Efficiency in Acetic Acid Manufacturing by Methanol Carbonylation. Chemical Engineering and Technology, 2021, 44, 1792-1802.	0.9	3
5	Eco-efficient Separation of Mono- and Dichloroacetic Acid by Thermally Coupled Extractive Distillation. Chemical Engineering and Technology, 2020, 43, 2403-2417.	0.9	4
6	Rethinking energy use in distillation processes for a more sustainable chemical industry. Energy, 2020, 203, 117788.	4.5	80
7	Novel eco-efficient process for dimethyl carbonate production by indirect alcoholysis of urea. Chemical Engineering Research and Design, 2020, 160, 486-498.	2.7	13
8	A systematic framework for assessing the applicability of reactive distillation for quaternary mixtures using a mapping method. Computers and Chemical Engineering, 2020, 136, 106804.	2.0	5
9	Process systems engineering developments in Europe from an industrial and academic perspective. Computers and Chemical Engineering, 2020, 138, 106823.	2.0	11
10	From Batch to Continuous Sustainable Production of 3-Methyl-3-penten-2-one for Synthetic Ketone Fragrances. ACS Sustainable Chemistry and Engineering, 2020, 8, 17201-17214.	3.2	8
11	Eco-efficient processes for biodiesel production from waste lipids. Journal of Cleaner Production, 2019, 239, 118073.	4.6	27
12	Innovative mapping method for screening reactive distillation designs. Computer Aided Chemical Engineering, 2019, 46, 739-744.	0.3	2
13	Pilot-scale experimental studies on ethanol purification by cyclic stripping. AIChE Journal, 2019, 65, e16673.	1.8	9
14	Dynamics and control of a heat pump assisted azeotropic dividing-wall column for biobutanol purification. Chemical Engineering Research and Design, 2019, 146, 416-426.	2.7	17
15	Optimally designed reactive distillation processes for eco-efficient production of ethyl levulinate. Journal of Chemical Technology and Biotechnology, 2019, 94, 2131-2140.	1.6	23
16	Effect of boiling point rankings and feed locations on the applicability of reactive distillation to quaternary systems. Chemical Engineering Research and Design, 2019, 145, 184-193.	2.7	12
17	Process engineering advances in pharmaceutical and chemical industries: digital process design, advanced rectification, and continuous filtration. Current Opinion in Chemical Engineering, 2019, 25, 114-121.	3.8	11
18	Inherently Safer Design and Optimization of Intensified Separation Processes for Furfural Production. Industrial & Engineering Chemistry Research, 2019, 58, 6105-6120.	1.8	45

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19	Reactive Distillation: Stepping Up to the Next Level of Process Intensification. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 5909-5918.	1.8	116
20	Novel Catalytic Reactive Distillation Processes for a Sustainable Chemical Industry. <i>Topics in Catalysis</i> , 2019, 62, 1132-1148.	1.3	42
21	Dynamics and control of a heat pump assisted azeotropic dividing-wall column (HP-A-DWC) for biobutanol purification. <i>Computer Aided Chemical Engineering</i> , 2019, 46, 1339-1344.	0.3	4
22	Eco-efficient Downstream Processing of Biobutanol by Enhanced Process Intensification and Integration. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 5452-5461.	3.2	57
23	Novel method for mapping the applicability of reactive distillation. <i>Chemical Engineering and Processing: Process Intensification</i> , 2018, 128, 263-275.	1.8	32
24	Ultrasound-assisted emerging technologies for chemical processes. <i>Journal of Chemical Technology and Biotechnology</i> , 2018, 93, 1219-1227.	1.6	33
25	An industrial perspective on membrane distillation processes. <i>Journal of Chemical Technology and Biotechnology</i> , 2018, 93, 2047-2055.	1.6	71
26	Preliminary economic ranking of reactive distillation processes using a navigation method. <i>Computer Aided Chemical Engineering</i> , 2018, 43, 827-832.	0.3	5
27	Innovative Reactive Distillation Process for the Sustainable Synthesis of Natural Benzaldehyde. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 14114-14124.	3.2	32
28	Heat pump assisted azeotropic DWC for enhanced biobutanol separation. <i>Computer Aided Chemical Engineering</i> , 2018, 43, 791-796.	0.3	4
29	A review on process intensification in <i>HiGee</i> distillation. <i>Journal of Chemical Technology and Biotechnology</i> , 2017, 92, 1136-1156.	1.6	71
30	Dynamics and control of a heat pump assisted extractive dividing-wall column for bioethanol dehydration. <i>Chemical Engineering Research and Design</i> , 2017, 119, 66-74.	2.7	58
31	Optimal design of intensified processes for DME synthesis. <i>Computers and Chemical Engineering</i> , 2017, 105, 142-151.	2.0	67
32	Techno-economic evaluation of an ultrasound-assisted Enzymatic Reactive Distillation process. <i>Computers and Chemical Engineering</i> , 2017, 105, 123-131.	2.0	9
33	Microwave plasma emerging technologies for chemical processes. <i>Journal of Chemical Technology and Biotechnology</i> , 2017, 92, 2495-2505.	1.6	37
34	Optimal hybrid separations for intensified downstream processing of biobutanol. <i>Separation and Purification Technology</i> , 2017, 185, 149-159.	3.9	39
35	Enhanced performance of wet compression-resorption heat pumps by using NH ₃ -CO ₂ -H ₂ O as working fluid. <i>Energy</i> , 2017, 124, 531-542.	4.5	14
36	Eco-efficient butanol separation in the ABE fermentation process. <i>Separation and Purification Technology</i> , 2017, 177, 49-61.	3.9	87

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37	Modular manufacturing processes: Status, challenges, and opportunities. <i>AIChE Journal</i> , 2017, 63, 4262-4272.	1.8	133
38	Enhanced Process for Methanol Production by CO ₂ Hydrogenation. <i>Computer Aided Chemical Engineering</i> , 2016, , 985-990.	0.3	5
39	Enhanced Down-Stream Processing of Biobutanol in the ABE Fermentation Process. <i>Computer Aided Chemical Engineering</i> , 2016, 38, 979-984.	0.3	13
40	Novel Process for Conversion of CO ₂ to Dimethyl Carbonate using Catalytic Membrane Reactors. <i>Computer Aided Chemical Engineering</i> , 2016, , 991-996.	0.3	4
41	Cyclic distillation technology - a mini-review. <i>Journal of Chemical Technology and Biotechnology</i> , 2016, 91, 1215-1223.	1.6	25
42	Separation technologyâ€“Making a difference in biorefineries. <i>Biomass and Bioenergy</i> , 2016, 95, 296-309.	2.9	111
43	Quick assessment of binary distillation efficiency using a heat engine perspective. <i>Energy</i> , 2016, 116, 20-31.	4.5	33
44	Techno-economic evaluation of the direct conversion of CO ₂ to dimethyl carbonate using catalytic membrane reactors. <i>Computers and Chemical Engineering</i> , 2016, 86, 136-147.	2.0	35
45	Novel efficient process for methanol synthesis by CO ₂ hydrogenation. <i>Chemical Engineering Journal</i> , 2016, 284, 260-269.	6.6	240
46	Novel Heat-Pump-Assisted Extractive Distillation for Bioethanol Purification. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 2208-2213.	1.8	160
47	Optimal design and plantwide control of novel processes for diâ€“nâ€“pentyl ether production. <i>Journal of Chemical Technology and Biotechnology</i> , 2015, 90, 992-1001.	1.6	21
48	Low grade waste heat recovery using heat pumps and power cycles. <i>Energy</i> , 2015, 89, 864-873.	4.5	105
49	Energy Efficient Bioethanol Purification by Heat Pump Assisted Extractive Distillation. <i>Computer Aided Chemical Engineering</i> , 2015, , 1307-1312.	0.3	3
50	A systematic investigation of microwave-assisted reactive distillation: Influence of microwaves on separation and reaction. <i>Chemical Engineering and Processing: Process Intensification</i> , 2015, 93, 87-97.	1.8	27
51	Pilotâ€“scale studies of process intensification by cyclic distillation. <i>AIChE Journal</i> , 2015, 61, 2581-2591.	1.8	29
52	A systems engineering perspective on process integration in industrial biotechnology. <i>Journal of Chemical Technology and Biotechnology</i> , 2015, 90, 349-355.	1.6	60
53	Distillation technologyâ€“Still young and full of breakthrough opportunities. <i>Journal of Chemical Technology and Biotechnology</i> , 2014, 89, 479-498.	1.6	201
54	Cyclic distillation â€“ Design, control and applications. <i>Separation and Purification Technology</i> , 2014, 125, 326-336.	3.9	31

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55	Catalytic cyclic distillation – A novel process intensification approach in reactive separations. Chemical Engineering and Processing: Process Intensification, 2014, 81, 1-12.	1.8	31
56	Optimal performance of compression–resorption heat pump systems. Applied Thermal Engineering, 2014, 65, 219-225.	3.0	15
57	A review on process intensification in internally heat-integrated distillation columns. Chemical Engineering and Processing: Process Intensification, 2014, 86, 125-144.	1.8	97
58	Batch Processes. Computer Aided Chemical Engineering, 2014, 35, 449-488.	0.3	15
59	Steady-State Flowsheeting. Computer Aided Chemical Engineering, 2014, 35, 73-125.	0.3	3
60	Process Intensification. Computer Aided Chemical Engineering, 2014, 35, 397-448.	0.3	15
61	Generalised Computational Methods in Thermodynamics. Computer Aided Chemical Engineering, 2014, , 157-200.	0.3	4
62	Optimal Extractive Distillation Process for Bioethanol Dehydration. Computer Aided Chemical Engineering, 2014, 33, 1333-1338.	0.3	5
63	Process Synthesis by the Hierarchical Approach. Computer Aided Chemical Engineering, 2014, , 253-300.	0.3	3
64	Synthesis of Reaction Systems. Computer Aided Chemical Engineering, 2014, 35, 301-343.	0.3	2
65	Synthesis of Separation Systems. Computer Aided Chemical Engineering, 2014, 35, 345-395.	0.3	1
66	Introduction in Process Simulation. Computer Aided Chemical Engineering, 2014, 35, 35-71.	0.3	7
67	Chemical Product Design. Computer Aided Chemical Engineering, 2014, , 489-523.	0.3	8
68	Pinch Point Analysis. Computer Aided Chemical Engineering, 2014, 35, 525-564.	0.3	17
69	Applied Energy Integration. Computer Aided Chemical Engineering, 2014, 35, 565-598.	0.3	0
70	Plantwide Control. Computer Aided Chemical Engineering, 2014, , 599-647.	0.3	2
71	Health, Safety and Environment. Computer Aided Chemical Engineering, 2014, , 649-678.	0.3	2
72	Process Design Project. Computer Aided Chemical Engineering, 2014, 35, 703-715.	0.3	0

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73	Economic Evaluation of Projects. Computer Aided Chemical Engineering, 2014, 35, 717-755.	0.3	12
74	Equipment Selection and Design. Computer Aided Chemical Engineering, 2014, 35, 757-788.	0.3	2
75	Phase Equilibria. Computer Aided Chemical Engineering, 2014, 35, 201-251.	0.3	4
76	Sustainability Analysis. Computer Aided Chemical Engineering, 2014, 35, 679-702.	0.3	1
77	Integrated Process and Product Design. Computer Aided Chemical Engineering, 2014, , 1-33.	0.3	6
78	Dynamic Simulation. Computer Aided Chemical Engineering, 2014, 35, 127-156.	0.3	12
79	Control of Cyclic Distillation Systems. Computer Aided Chemical Engineering, 2014, 33, 589-594.	0.3	1
80	Optimal design, dynamics and control of a reactive DWC for biodiesel production. Chemical Engineering Research and Design, 2013, 91, 1760-1767.	2.7	67
81	Evaluation of configuration alternatives for multi-product polyester synthesis by reactive distillation. Computers and Chemical Engineering, 2013, 52, 193-203.	2.0	9
82	Optimal Economic Design of an Extractive Distillation Process for Bioethanol Dehydration. Energy Technology, 2013, 1, 166-170.	1.8	41
83	Design and optimization of an ethanol dehydration process using stochastic methods. Separation and Purification Technology, 2013, 105, 90-97.	3.9	76
84	Intensified process for aromatics separation powered by Kaibel and dividing-wall columns. Chemical Engineering and Processing: Process Intensification, 2013, 67, 39-48.	1.8	36
85	Revamping Dimethyl Ether Separation to a Single-Step Process. Chemical Engineering and Technology, 2013, 36, 1261-1267.	0.9	20
86	Novel applications of dividing-wall column technology to biofuel production processes. Journal of Chemical Technology and Biotechnology, 2013, 88, 1387-1404.	1.6	68
87	Optimization of an Ethanol Dehydration Process Using Differential Evolution Algorithm. Computer Aided Chemical Engineering, 2013, , 217-222.	0.3	6
88	Enhanced configurations for polyesters synthesis by reactive distillation. Computer Aided Chemical Engineering, 2013, 32, 457-462.	0.3	0
89	Innovative biodiesel production in a reactive dividing-wall column. Computer Aided Chemical Engineering, 2012, 30, 522-526.	0.3	2
90	Enhancing multi-component separation of aromatics with Kaibel columns and DWC. Computer Aided Chemical Engineering, 2012, 30, 672-676.	0.3	0

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91	Enhanced bioethanol dehydration in extractive dividing-wall columns. Computer Aided Chemical Engineering, 2012, , 667-671.	0.3	3
92	Reactive absorption in chemical process industry: A review on current activities. Chemical Engineering Journal, 2012, 213, 371-391.	6.6	108
93	Pilot-scale experimental validation of unsaturated polyesters synthesis by reactive distillation. Chemical Engineering Journal, 2012, 213, 175-185.	6.6	13
94	A systematic framework for the feasibility and technical evaluation of reactive distillation processes. Chemical Engineering and Processing: Process Intensification, 2012, 60, 55-64.	1.8	64
95	Efficient Bioethanol Dehydration in Azeotropic and Extractive Dividing-wall Columns. Procedia Engineering, 2012, 42, 566-572.	1.2	10
96	Enhanced Dimethyl Ether Synthesis by Reactive Distillation in a Dividing-wall Column. Procedia Engineering, 2012, 42, 581-587.	1.2	13
97	Modeling, Design and Control of Cyclic Distillation Systems. Procedia Engineering, 2012, 42, 1202-1213.	1.2	6
98	Towards FAME and Fortune by Reactive DWC. Procedia Engineering, 2012, 42, 1908-1914.	1.2	1
99	Gas Holdup, Axial Dispersion, and Mass Transfer Studies in Bubble Columns. Industrial & Engineering Chemistry Research, 2012, 51, 14268-14278.	1.8	46
100	Cyclic distillation - towards energy efficient binary distillation. Computer Aided Chemical Engineering, 2012, , 697-701.	0.3	4
101	Enhanced methanol recovery and glycerol separation in biodiesel production – DWC makes it happen. Applied Energy, 2012, 99, 146-153.	5.1	81
102	Towards energy efficient distillation technologies – Making the right choice. Energy, 2012, 47, 531-542.	4.5	213
103	Innovative single step bioethanol dehydration in an extractive dividing-wall column. Separation and Purification Technology, 2012, 98, 290-297.	3.9	155
104	Extractant screening for the separation of dichloroacetic acid from monochloroacetic acid by extractive distillation. Separation and Purification Technology, 2012, 98, 206-215.	3.9	20
105	MODELING AND SIMULATION OF A PERVAPORATION PROCESS FOR FATTY ESTER SYNTHESIS. Chemical Engineering Communications, 2012, 199, 1357-1374.	1.5	11
106	Selection of heat pump technologies for energy efficient distillation. Computer Aided Chemical Engineering, 2012, , 267-271.	0.3	1
107	Extended rate-based model validation for polyester synthesis by reactive distillation. Computer Aided Chemical Engineering, 2012, 30, 1182-1186.	0.3	3
108	A review of biodiesel production by integrated reactive separation technologies. Journal of Chemical Technology and Biotechnology, 2012, 87, 861-879.	1.6	132

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109	Dynamic optimization of a dividing-wall column using model predictive control. Chemical Engineering Science, 2012, 68, 132-142.	1.9	105
110	Influence of liquid back mixing on a kinetically controlled reactive distillation process. Chemical Engineering Science, 2012, 68, 184-191.	1.9	18
111	Reactive DWC leading the way to FAME and fortune. Fuel, 2012, 95, 352-359.	3.4	108
112	Innovative dimethyl ether synthesis in a reactive dividing-wall column. Computers and Chemical Engineering, 2012, 38, 74-81.	2.0	126
113	Enhanced bioethanol dehydration by extractive and azeotropic distillation in dividing-wall columns. Separation and Purification Technology, 2012, 86, 70-78.	3.9	323
114	Modeling the liquid back mixing characteristics for a kinetically controlled reactive distillation process. Computer Aided Chemical Engineering, 2011, 29, 11-15.	0.3	1
115	A systematic approach towards applicability of reactive distillation. Computer Aided Chemical Engineering, 2011, 29, 191-195.	0.3	3
116	Control and dynamic optimization of a BTX dividing-wall column. Computer Aided Chemical Engineering, 2011, , 447-451.	0.3	0
117	Energy efficient control of a BTX dividing-wall column. Computers and Chemical Engineering, 2011, 35, 2896-2904.	2.0	138
118	Integrated reactive absorption process for synthesis of fatty esters. Bioresource Technology, 2011, 102, 490-498.	4.8	50
119	Dividing wall columns in chemical process industry: A review on current activities. Separation and Purification Technology, 2011, 80, 403-417.	3.9	344
120	Dynamics and control of a biodiesel process by reactive absorption. Chemical Engineering Research and Design, 2011, 89, 187-196.	2.7	43
121	A control perspective on process intensification in dividing-wall columns. Chemical Engineering and Processing: Process Intensification, 2011, 50, 281-292.	1.8	181
122	Understanding process intensification in cyclic distillation systems. Chemical Engineering and Processing: Process Intensification, 2011, 50, 655-664.	1.8	68
123	Heat-integrated reactive distillation process for synthesis of fatty esters. Fuel Processing Technology, 2011, 92, 1288-1296.	3.7	92
124	Design and control of an energy integrated biodiesel process. Computer Aided Chemical Engineering, 2011, 29, 186-190.	0.3	0
125	Dynamic modeling and process optimization of an industrial sulfuric acid plant. Chemical Engineering Journal, 2010, 158, 241-249.	6.6	38
126	Separative reactors for integrated production of bioethanol and biodiesel. Computers and Chemical Engineering, 2010, 34, 812-820.	2.0	57

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127	Heat-Integrated Process for Biodiesel by Reactive Absorption. Computer Aided Chemical Engineering, 2010, 28, 1111-1116.	0.3	3
128	Advanced Control Strategies for Dividing-Wall Columns. Computer Aided Chemical Engineering, 2010, 28, 511-516.	0.3	1
129	Comparison of Control Strategies for Dividing-Wall Columns. Industrial & Engineering Chemistry Research, 2010, 49, 288-307.	1.8	120
130	Plantwide Control of a Biodiesel Process by Reactive Absorption. Computer Aided Chemical Engineering, 2010, 28, 535-540.	0.3	2
131	Reactive Dividing-Wall Columns - Defying Equilibrium Restrictions. Chemical Product and Process Modeling, 2009, 4, .	0.5	2
132	Novel process for biodiesel by reactive absorption. Separation and Purification Technology, 2009, 69, 280-287.	3.9	78
133	Innovative process for fatty acid esters by dual reactive distillation. Computers and Chemical Engineering, 2009, 33, 743-750.	2.0	88
134	REACTIVE DIVIDING-WALL COLUMNSâ€”HOW TO GET MORE WITH LESS RESOURCES?. Chemical Engineering Communications, 2009, 196, 1366-1374.	1.5	83
135	Versatile Biodiesel Production by Catalytic Separative Reactors. Computer Aided Chemical Engineering, 2009, 27, 1689-1694.	0.3	3
136	Biodiesel by Reactive Absorption â€” Towards Green Technologies. Computer Aided Chemical Engineering, 2009, 26, 847-852.	0.3	2
137	Flexible Separative Reactors for Biodiesel Production. Computer Aided Chemical Engineering, 2009, , 1287-1292.	0.3	0
138	Cutting Edge Biodiesel Production by Catalytic Reactive Absorption. Computer Aided Chemical Engineering, 2009, , 945-950.	0.3	0
139	Biodiesel by Catalytic Reactive Distillation Powered by Metal Oxides. Energy & Fuels, 2008, 22, 598-604.	2.5	229
140	Biodiesel production by heat-integrated reactive distillation. Computer Aided Chemical Engineering, 2008, , 775-780.	0.3	5
141	Process for fatty acid methyl esters by dual reactive distillation. Computer Aided Chemical Engineering, 2007, , 1307-1312.	0.3	3
142	Overcoming equilibrium limitations in reactive dividing-wall columns. Computer Aided Chemical Engineering, 2007, 24, 467-472.	0.3	5
143	Biodiesel production by integrated reactive-separation design. Computer Aided Chemical Engineering, 2007, 24, 1283-1288.	0.3	5
144	Advanced control of a reactive distillation column. Computer Aided Chemical Engineering, 2007, 24, 805-810.	0.3	14

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145	Design and control of recycle systems by non-linear analysis. Computers and Chemical Engineering, 2007, 31, 601-611.	2.0	54
146	Linking experiments to modeling in biodiesel production. Computer Aided Chemical Engineering, 2006, , 731-736.	0.3	1
147	Optimization studies in sulfuric acid production. Computer Aided Chemical Engineering, 2006, , 737-742.	0.3	10
148	Molecular design based on enhanced topological descriptors. Computer Aided Chemical Engineering, 2006, 21, 931-936.	0.3	1
149	The heterogeneous advantage: biodiesel by catalytic reactive distillation. Topics in Catalysis, 2006, 40, 141-150.	1.3	199
150	Solid Acid Catalysts for Biodiesel Production –Towards Sustainable Energy. Advanced Synthesis and Catalysis, 2006, 348, 75-81.	2.1	499
151	Design and control of recycle systems by non-linear analysis. Computer Aided Chemical Engineering, 2005, , 637-642.	0.3	0
152	Design of Recycle Systems with Parallel and Consecutive Reactions by Nonlinear Analysis. Industrial & Engineering Chemistry Research, 2005, 44, 576-587.	1.8	21
153	State multiplicity in multi-reaction reactor-separator-recycle systems. Computer Aided Chemical Engineering, 2004, 18, 223-228.	0.3	1
154	State multiplicity in PFR –separator –recycle polymerization systems. Chemical Engineering Science, 2003, 58, 2973-2984.	1.9	33
155	Stable plantwide control of recycle systems. Computer Aided Chemical Engineering, 2003, 15, 726-731.	0.3	2
156	Unstable behaviour of plants with recycle. Computer Aided Chemical Engineering, 2003, 14, 431-436.	0.3	0
157	Non-linear behaviour of PFR-separator-recycle polymerization systems. Computer Aided Chemical Engineering, 2002, , 229-234.	0.3	1
158	State multiplicity in CSTR –separator –recycle polymerisation systems. Chemical Engineering Science, 2002, 57, 535-546.	1.9	45