Paul R Amyotte

List of Publications by Year
in descending order

157 papers	7,795 citations	47006 47 h-index	56724 83 g-index
164 all docs	164 docs citations	164 times ranked	2763 citing authors

#	Article	IF	Citations
1	Safety analysis in process facilities: Comparison of fault tree and Bayesian network approaches. Reliability Engineering and System Safety, 2011, 96, 925-932.	8.9	552
2	Dynamic safety analysis of process systems by mapping bow-tie into Bayesian network. Chemical Engineering Research and Design, 2013, 91, 46-53.	5.6	429
3	Quantitative risk analysis of offshore drilling operations: A Bayesian approach. Safety Science, 2013, 57, 108-117.	4.9	309
4	Dynamic risk analysis using bow-tie approach. Reliability Engineering and System Safety, 2012, 104, 36-44.	8.9	280
5	Domino Effect Analysis Using Bayesian Networks. Risk Analysis, 2013, 33, 292-306.	2.7	204
6	Dust explosion causation, prevention and mitigation: An overview. Journal of Chemical Health and Safety, 2010, 17, 15-28.	2.1	186
7	Fault and Event Tree Analyses for Process Systems Risk Analysis: Uncertainty Handling Formulations. Risk Analysis, 2011, 31, 86-107.	2.7	182
8	Dust explosions: A threat to the process industries. Chemical Engineering Research and Design, 2015, 98, 57-71.	5.6	167
9	Analyzing system safety and risks under uncertainty using a bow-tie diagram: An innovative approach. Chemical Engineering Research and Design, 2013, 91, 1-18.	5.6	166
10	Solid inertants and their use in dust explosion prevention and mitigation. Journal of Loss Prevention in the Process Industries, 2006, 19, 161-173.	3.3	158
11	Integrated inherent safety index (I2SI): A tool for inherent safety evaluation. Process Safety Progress, 2004, 23, 136-148.	1.0	157
12	SHIPP methodology: Predictive accident modeling approach. Part I: Methodology and model description. Chemical Engineering Research and Design, 2011, 89, 151-164.	5.6	150
13	I2SI: A comprehensive quantitative tool for inherent safety and cost evaluation. Journal of Loss Prevention in the Process Industries, 2005, 18, 310-326.	3.3	145
14	How to Make Inherent Safety Practice a Reality. Canadian Journal of Chemical Engineering, 2003, 81, 2-16.	1.7	133
15	Application of inherent safety principles to dust explosion prevention and mitigation. Chemical Engineering Research and Design, 2009, 87, 35-39.	5.6	129
16	Dynamic risk management: a contemporary approach to process safety management. Current Opinion in Chemical Engineering, 2016, 14, 9-17.	7.8	129
17	Inherent safety in offshore oil and gas activities: a review of the present status and future directions. Journal of Loss Prevention in the Process Industries, 2002, 15, 279-289.	3.3	122
18	Risk-based design of process systems using discrete-time Bayesian networks. Reliability Engineering and System Safety, 2013, 109, 5-17.	8.9	114

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19	A bibliometric review of process safety and risk analysis. Chemical Engineering Research and Design, 2019, 126, 366-381.	5.6	111
20	Some myths and realities about dust explosions. Chemical Engineering Research and Design, 2014, 92, 292-299.	5.6	95
21	Determination of human error probabilities for offshore platform musters. Journal of Loss Prevention in the Process Industries, 2005, 18, 488-501.	3.3	90
22	Handling data uncertainties in event tree analysis. Chemical Engineering Research and Design, 2009, 87, 283-292.	5.6	90
23	SHIPP methodology: Predictive accident modeling approach. Part II. Validation with case study. Chemical Engineering Research and Design, 2011, 89, 75-88.	5.6	88
24	Effectiveness of dust dispersion in the 20-L Siwek chamber. Journal of Loss Prevention in the Process Industries, 2010, 23, 46-59.	3.3	86
25	Risk Analysis of Dust Explosion Scenarios Using Bayesian Networks. Risk Analysis, 2015, 35, 278-291.	2.7	85
26	Risk-based process plant design considering inherent safety. Safety Science, 2014, 70, 438-464.	4.9	84
27	HEPI: A new tool for human error probability calculation for offshore operation. Safety Science, 2006, 44, 313-334.	4.9	83
28	Safety assessment in plant layout design using indexing approach: Implementing inherent safety perspective. Journal of Hazardous Materials, 2008, 160, 100-109.	12.4	83
29	The ignitability of coal dust-air and methane-coal dust-air mixtures. Fuel, 1993, 72, 671-679.	6.4	81
30	Moderation of dust explosions. Journal of Loss Prevention in the Process Industries, 2007, 20, 675-687.	3.3	81
31	An integrated approach for fire and explosion consequence modelling. Fire Safety Journal, 2013, 61, 324-337.	3.1	76
32	Explosibility of micron- and nano-size titanium powders. Journal of Loss Prevention in the Process Industries, 2013, 26, 1646-1654.	3.3	76
33	Safety assessment in plant layout design using indexing approach: Implementing inherent safety perspective. Journal of Hazardous Materials, 2008, 160, 110-121.	12.4	75
34	Incorporation of inherent safety principles in process safety management. Process Safety Progress, 2007, 26, 333-346.	1.0	73
35	Risk Management of Domino Effects Considering Dynamic Consequence Analysis. Risk Analysis, 2014, 34, 1128-1138.	2.7	73
36	Moderation of Al dust explosions by micro- and nano-sized Al2O3powder. Journal of Hazardous Materials, 2020, 381, 120968.	12.4	71

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37	Accident modeling approach for safety assessment in an LNG processing facility. Journal of Loss Prevention in the Process Industries, 2012, 25, 414-423.	3.3	70
38	Dynamic approach to risk management: Application to the Hoeganaes metal dust accidents. Chemical Engineering Research and Design, 2014, 92, 669-679.	5.6	68
39	Process Plants. , 0, , .		67
40	Determination of human error probabilities in maintenance procedures of a pump. Chemical Engineering Research and Design, 2014, 92, 131-141.	5.6	66
41	Domino effect analysis of dust explosions using Bayesian networks. Chemical Engineering Research and Design, 2016, 100, 108-116.	5.6	64
42	Factors influencing the suppression of coal dust explosions. Fuel, 1997, 76, 663-670.	6.4	63
43	Bayesian Stochastic Petri Nets (BSPN) - A new modelling tool for dynamic safety and reliability analysis. Reliability Engineering and System Safety, 2020, 193, 106587.	8.9	60
44	Revised fire consequence models for offshore quantitative risk assessment. Journal of Loss Prevention in the Process Industries, 2005, 18, 443-454.	3.3	59
45	Prevention and mitigation of dust and hybrid mixture explosions. Process Safety Progress, 2010, 29, 17-21.	1.0	55
46	Evaluation of available indices for inherently safer design options. Process Safety Progress, 2003, 22, 83-97.	1.0	53
47	Prevention in the chemical and process industries: Future directions. Journal of Loss Prevention in the Process Industries, 2012, 25, 227-231.	3.3	53
48	Risk assessment of rare events. Chemical Engineering Research and Design, 2015, 98, 102-108.	5.6	50
49	Why major accidents are still occurring. Current Opinion in Chemical Engineering, 2016, 14, 1-8.	7.8	48
50	Minimum ignition temperature of nano and micro Ti powder clouds in the presence of inert nano TiO2 powder. Journal of Hazardous Materials, 2014, 275, 1-9.	12.4	46
51	Dust explosion risk moderation for flocculent dusts. Journal of Loss Prevention in the Process Industries, 2012, 25, 862-869.	3.3	45
52	Operational risk assessment: A case of the Bhopal disaster. Chemical Engineering Research and Design, 2015, 97, 70-79.	5.6	45
53	Modeling of BP Texas City refinery incident. Journal of Loss Prevention in the Process Industries, 2007, 20, 387-395.	3.3	44
54	Review of the Explosibility of Nontraditional Dusts. Industrial & Engineering Chemistry Research, 2012, 51, 7651-7655.	3.7	43

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55	Inerting of coal dust explosions in laboratory- and intermediate-scale chambers. Fuel, 2001, 80, 1593-1602.	6.4	42
56	A comparison of experimental methods to determine the minimum explosible concentration of dusts. Fuel, 1996, 75, 654-658.	6.4	41
57	Process safety concerns in process system digitalization. Education for Chemical Engineers, 2021, 34, 33-46.	4.8	41
58	Minimum ignition energy of nano and micro Ti powder in the presence of inert nano TiO2 powder. Journal of Hazardous Materials, 2014, 274, 322-330.	12.4	40
59	Risk-based optimal safety measure allocation for dust explosions. Safety Science, 2015, 74, 79-92.	4.9	40
60	The role of inherently safer design in process safety. Canadian Journal of Chemical Engineering, 2021, 99, 853-871.	1.7	40
61	Effects of methane admixture, particle size and volatile content on the dolomite inerting requirements of coal dust. Journal of Hazardous Materials, 1991, 27, 187-203.	12.4	39
62	Effect of Inerts on Layer Ignition Temperatures of Coal Dust. Combustion and Flame, 1998, 114, 41-53.	5.2	38
63	Laboratory investigation of the dust explosibility characteristics of three Nova Scotia coals. Journal of Loss Prevention in the Process Industries, 1991, 4, 102-109.	3.3	35
64	An inherent safety-based incident investigation methodology. Process Safety Progress, 2004, 23, 197-205.	1.0	35
65	A model for estimating the probability of missile impact: Missiles originating from bursting horizontal cylindrical vessels. Process Safety Progress, 2007, 26, 129-139.	1.0	34
66	How to address model uncertainty in the escalation of domino effects?. Journal of Loss Prevention in the Process Industries, 2018, 54, 49-56.	3.3	34
67	Risk-Based Design of Safety Measures To Prevent and Mitigate Dust Explosion Hazards. Industrial & Engineering Chemistry Research, 2013, 52, 18095-18108.	3.7	33
68	A quantitative risk management framework for dust and hybrid mixture explosions. Journal of Loss Prevention in the Process Industries, 2013, 26, 283-289.	3.3	31
69	An investigation of iron sulphide dust minimum ignition temperatures. Journal of Hazardous Materials, 2003, 97, 1-9.	12.4	30
70	Laminar burning velocity and structure of coal dust flames using a unity Lewis number CFD model. Combustion and Flame, 2018, 190, 87-102.	5.2	30
71	Iron and aluminum powder explosibility in 20-L and 1-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"><mml:mrow><mml:msup><mml:mrow><mml:mtext>m</mml:mtext></mml:mrow><mml:mrow><mml:mn>3</mml:m chambers. Journal of Loss Prevention in the Process Industries, 2019, 62, 103927.	3.3	30
72	An optimal level of dust explosion risk management: Framework andÂapplication. Journal of Loss Prevention in the Process Industries, 2013, 26, 1530-1541.	3.3	29

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73	The influence of injector design on the decay of pre-ignition turbulence in a spherical explosion chamber. Journal of Loss Prevention in the Process Industries, 2001, 14, 269-282.	3.3	27
74	Dust explosion hazard of pulverized fuel carry-over. Journal of Hazardous Materials, 2005, 122, 23-30.	12.4	27
75	ExpHAZOP+: Knowledge-based expert system to conduct automated HAZOP analysis. Journal of Loss Prevention in the Process Industries, 2009, 22, 373-380.	3.3	26
76	Fire hazard of titanium powder layers mixed with inert nano TiO2 powder. Journal of Hazardous Materials, 2018, 346, 19-26.	12.4	26
77	Lower flammability limits of hybrid mixtures containing 10 micron coal dust particles and methane gas. Chemical Engineering Research and Design, 2018, 120, 215-226.	5.6	26
78	Inherently safer design protocol for process hazard analysis. Chemical Engineering Research and Design, 2021, 149, 199-211.	5.6	24
79	Fatigue reliability analysis of deep water rigid marine risers associated with Morison-type wave loading. Stochastic Environmental Research and Risk Assessment, 2008, 22, 379-390.	4.0	23
80	An analysis of CSB investigation reports concerning the hierarchy of controls. Process Safety Progress, 2011, 30, 261-265.	1.0	23
81	A model to assess dust explosion occurrence probability. Journal of Hazardous Materials, 2014, 268, 140-149.	12.4	22
82	Retrospective risk analysis and controls for Semabla grain storage hybrid mixture explosion. Chemical Engineering Research and Design, 2016, 100, 49-64.	5.6	22
83	Effectiveness of various rock dusts as agents of coal dust inerting. Journal of Loss Prevention in the Process Industries, 1992, 5, 196-199.	3.3	21
84	Explosibility of polyamide and polyester fibers. Journal of Loss Prevention in the Process Industries, 2013, 26, 1627-1633.	3.3	21
85	Effects of dust dispersibility on the suppressant enhanced explosion parameter (SEEP) in flame propagation of Al dust clouds. Journal of Hazardous Materials, 2021, 404, 124119.	12.4	21
86	Major Accidents (Gray Swans) Likelihood Modeling Using Accident Precursors and Approximate Reasoning. Risk Analysis, 2015, 35, 1336-1347.	2.7	20
87	Electric spark ignition sensitivity of nano and micro Ti powder layers in the presence of inert nano TiO 2 powder. Journal of Loss Prevention in the Process Industries, 2017, 46, 84-93.	3.3	20
88	Effect of admixed solid inertants on dispersibility of combustible dust clouds in a modified hartmann tube. Chemical Engineering Research and Design, 2020, 135, 1-11.	5.6	20
89	Modelling of the effect of size on flocculent dust explosions. Journal of Loss Prevention in the Process Industries, 2013, 26, 1634-1638.	3.3	19
90	Effect of solid inertants and sample inclination angle on fire hazard of metallic powder layers. Chemical Engineering Research and Design, 2019, 129, 321-325.	5.6	19

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91	Ignition hazard of non-metallic dust clouds exposed to hotspots versus electrical sparks. Journal of Hazardous Materials, 2019, 365, 895-904.	12.4	19
92	Fugitive emissions in chemical processes: The assessment and prevention based on inherent and add-on approaches. Journal of Loss Prevention in the Process Industries, 2012, 25, 820-829.	3.3	18
93	Effect of admixture of solid inertant on fire hazard of dust layers oriented at varying degrees of inclination. Journal of Loss Prevention in the Process Industries, 2019, 57, 41-46.	3.3	18
94	Laminar combustion regimes for hybrid mixtures of coal dust with methane gas below the gas lower flammability limit. Combustion and Flame, 2018, 198, 14-23.	5.2	17
95	How can process safety and a risk management approach guide pandemic risk management?. Journal of Loss Prevention in the Process Industries, 2020, 68, 104310.	3.3	17
96	Precautionary Principle (PP) versus As Low As Reasonably Practicable (ALARP): Which one to use and when. Chemical Engineering Research and Design, 2020, 137, 158-168.	5.6	17
97	Data-driven operational failure likelihood model for microbiologically influenced corrosion. Chemical Engineering Research and Design, 2021, 153, 472-485.	5.6	17
98	Advanced methods of risk assessment and management: An overview. Methods in Chemical Process Safety, 2020, , 1-34.	1.0	17
99	Process safety educational determinants. Process Safety Progress, 2013, 32, 126-130.	1.0	16
100	Evaluating regime diagrams for closed volume hybrid explosions. Journal of Loss Prevention in the Process Industries, 2017, 49, 912-918.	3.3	16
101	Experimental investigation of limiting oxygen concentration of hybrid mixtures. Journal of Loss Prevention in the Process Industries, 2019, 57, 120-130.	3.3	16
102	Effect of admixed silica on dispersibility of combustible dust clouds in a Godbert-Greenwald furnace. Powder Technology, 2020, 374, 496-506.	4.2	16
103	Chemical safety board investigation reports and the hierarchy of controls: Round 2. Process Safety Progress, 2018, 37, 459-466.	1.0	15
104	Niacin, lycopodium and polyethylene powder explosibility in 20-L and 1-m3 test chambers. Journal of Loss Prevention in the Process Industries, 2019, 62, 103937.	3.3	15
105	Fire hazard potential of non-metallic powder layers induced by deposit surfaces. Fire Safety Journal, 2021, 122, 103365.	3.1	15
106	Quantifying the effect of strong ignition sources on particle preconditioning and distribution in the 20-L chamber. Journal of Loss Prevention in the Process Industries, 2013, 26, 1574-1582.	3.3	14
107	Are classical process safety concepts relevant to nanotechnology applications?. Journal of Physics: Conference Series, 2011, 304, 012071.	0.4	13
108	Elements of Process Safety Management. Methods in Chemical Process Safety, 2017, , 87-148.	1.0	13

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109	Effect of sample orientation on fire hazard of non-metallic dust layers exposed to electric sparks. Journal of Loss Prevention in the Process Industries, 2018, 54, 229-237.	3.3	13
110	What went right. Chemical Engineering Research and Design, 2020, 135, 179-186.	5.6	13
111	Dust explosion prevention by addition of thermal inhibitors. Plant/Operations Progress, 1992, 11, 166-173.	0.3	12
112	Explosibility parameters for mixtures of pulverized fuel and ash. Journal of Loss Prevention in the Process Industries, 2006, 19, 142-148.	3.3	12
113	Role of particle diameter in laminar combustion regimes for hybrid mixtures of coal dust and methane gas. Powder Technology, 2020, 362, 399-408.	4.2	12
114	Opposite effects of typical solid inertants on flame propagation in Mg dust clouds versus dust layers. Fuel, 2022, 324, 124394.	6.4	12
115	Ignition hazard of titanium powder clouds exposed to hotspots. Journal of Loss Prevention in the Process Industries, 2019, 60, 106-115.	3.3	11
116	Characterization of Ti powders mixed with TiO2 powders: Thermal and kinetic studies. Journal of Loss Prevention in the Process Industries, 2020, 66, 104184.	3.3	11
117	Pandemic risk management using engineering safety principles. Chemical Engineering Research and Design, 2021, 150, 416-432.	5.6	11
118	Influence of liquid and vapourized solvents on explosibility of pharmaceutical excipient dusts. Process Safety Progress, 2014, 33, 374-379.	1.0	10
119	Role of particle diameter in the lower flammability limits of hybrid mixtures containing coal dust and methane gas. Journal of Loss Prevention in the Process Industries, 2019, 61, 206-212.	3.3	10
120	Application of bow tie analysis and inherently safer design to the novel coronavirus hazard. Chemical Engineering Research and Design, 2021, 152, 701-718.	5.6	10
121	Explosion hazards in underground coal mines. Toxicological and Environmental Chemistry, 1993, 40, 189-199.	1.2	9
122	Insight into the dust explosion hazard of pharmaceutical powders in the presence of flow aids. Journal of Loss Prevention in the Process Industries, 2022, 74, 104655.	3.3	9
123	Effect of inclination angle on fire hazard of melting dust layers. Chemical Engineering Research and Design, 2022, 160, 620-631.	5.6	9
124	Dust explosibility characteristics of azide-based gas generants. Journal of Loss Prevention in the Process Industries, 1997, 10, 101-111.	3.3	8
125	Industry specific dust explosion likelihood assessment model with case studies. Journal of Chemical Health and Safety, 2014, 21, 13-27.	2.1	8
126	Investigation of the explosion severity of multiphase hybrid mixtures. Process Safety Progress, 2020, 39, e12139.	1.0	8

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127	Inherently safer design principles in risk management. Methods in Chemical Process Safety, 2020, 4, 379-440.	1.0	7
128	Investigating the explosion hazard of hydrogen produced by activated aluminum in a modified Hartmann tube. International Journal of Hydrogen Energy, 2022, 47, 15933-15941.	7.1	7
129	Friction spark generation and incendivity of several metal alloys. Journal of Loss Prevention in the Process Industries, 2021, 70, 104406.	3.3	6
130	Numerical modelling of the effects of vessel length-to-diameter ratio (L/D) on pressure piling. Journal of Loss Prevention in the Process Industries, 2021, 70, 104398.	3.3	6
131	An exploratory study of explosion potential of dust from torrefied biomass. Canadian Journal of Chemical Engineering, 2015, 93, 658-663.	1.7	5
132	Experimental study on the minimum ignition energy of cornstarch particle-air flows in a horizontal pipeline. Journal of Loss Prevention in the Process Industries, 2022, 79, 104842.	3.3	5
133	Experimental and theoretical investigation of the lower explosion limit of multiphase hybrid mixtures. Process Safety Progress, 2019, 38, e12045.	1.0	4
134	Happy 90th birthday, Trevor!. Journal of Loss Prevention in the Process Industries, 2012, 25, 761-762.	3.3	2
135	Overpressure Effects. , 2013, , 43-69.		2
136	Managing Domino Effects from a Design-Based Viewpoint. , 2013, , 246-271.		2
137	Myth No. 2 (Fuel). , 2013, , 17-29.		1
138	Missile Projection Effects. , 2013, , 116-153.		1
139	Myth No. 4 (Fuel). , 2013, , 39-50.		0
140	Myth No. 14 (Confinement). , 2013, , 167-180.		0
141	Myth No. 18 (Pentagon). , 2013, , 207-218.		0
142	Myth No. 1 (Fuel). , 2013, , 9-16.		0
143	Myth No. 6 (Fuel/Ignition Source). , 2013, , 65-75.		0
144	Myth No. 12 (Mixing). , 2013, , 139-154.		0

#	Article	IF	Citations
145	Myth No. 8 (Ignition Source). , 2013, , 91-100.		0
146	Maintenance: Preparation and performance. , 2019, , 39-96.		0
147	Case histories and their use in enhancing process safety knowledge. , 2019, , 3-17.		0
148	Bhopal. , 2019, , 19-29.		0
149	Reactionsâ€"Planned and unplanned. , 2019, , 417-434.		0
150	Explosions. , 2019, , 435-456.		0
151	I did not knowâ€¦. , 2019, , 477-502.		0
152	Accident investigationâ€"Missed opportunities. , 2019, , 523-535.		0
153	Inherently safer design. , 2019, , 565-581.		0
154	Introducing a new journal feature: The Trevor Kletz & Sam Mannan Guest Perspective on Process Safety. Journal of Loss Prevention in the Process Industries, 2020, 66, 104221.	3.3	0
155	Hierarchy of controls in Contra Costa Health Services (CCHS) incident investigations. Process Safety Progress, 2021, 40, 375.	1.0	0
156	Myth No. 5 (Fuel). , 2013, , 51-63.		0
157	The fire hazard potential of thermally thin cellulose nonwovens with different overlap configurations. Textile Reseach Journal, 0, , 004051752211108.	2.2	0