

Zhiyuan Liu

List of Publications by Year in descending order

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126
papers

6,386
citations

70961

41
h-index

66788

78
g-index

126
all docs

126
docs citations

126
times ranked

8072
citing authors

#	ARTICLE	IF	CITATIONS
1	Cooperative control of yaw and roll motion for in-wheel motor vehicle with semi-active suspension. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2022, 236, 3-15.	1.1	7
2	A Novel PWA Lateral Dynamics Modeling Method and Switched T-S Observer Design for Vehicle Sideslip Angle Estimation. IEEE Transactions on Industrial Electronics, 2022, 69, 1847-1857.	5.2	9
3	Electrostatic Interaction-Based High Tissue Adhesive, Stretchable Microelectrode Arrays for the Electrophysiological Interface. ACS Applied Materials & Interfaces, 2022, 14, 4852-4861.	4.0	20
4	A soft intelligent dressing with pH and temperature sensors for early detection of wound infection. RSC Advances, 2022, 12, 3243-3252.	1.7	7
5	An intelligent nanomesh-reinforced graphene pressure sensor with an ultra large linear range. Journal of Materials Chemistry A, 2022, 10, 4858-4869.	5.2	14
6	A Mechanically Interlocking Strategy Based on Conductive Microbridges for Stretchable Electronics. Advanced Materials, 2022, 34, e2101339.	11.1	35
7	Electrical Failure Mechanism in Stretchable Thin-Film Conductors. ACS Applied Materials & Interfaces, 2022, 14, 3121-3129.	4.0	7
8	Recent advances in flexible and wearable sensors for monitoring chemical molecules. Nanoscale, 2022, 14, 1653-1669.	2.8	48
9	Intelligent and highly sensitive strain sensor based on indium tin oxide micromesh with a high crack density. Nanoscale, 2022, 14, 4234-4243.	2.8	6
10	Programmable living assembly of materials by bacterial adhesion. Nature Chemical Biology, 2022, 18, 289-294.	3.9	40
11	Extensible and self-recoverable proteinaceous materials derived from scallop byssal thread. Nature Communications, 2022, 13, 2731.	5.8	8
12	Electromyogram-strain synergetic intelligent artificial throat. Chemical Engineering Journal, 2022, 449, 137741.	6.6	11
13	Highly Stretchable and Permeable Conductors Based on Shrinkable Electrospun Fiber Mats. Advanced Fiber Materials, 2021, 3, 302-311.	7.9	40
14	Highly Thermal-Wet Comfortable and Conformal Silk-Based Electrodes for On-Skin Sensors with Sweat Tolerance. ACS Nano, 2021, 15, 9955-9966.	7.3	79
15	A Stretchable and Transparent Electrode Based on PEGylated Silk Fibroin for In Vivo Dual-Modal Neural-Vascular Activity Probing. Advanced Materials, 2021, 33, e2100221.	11.1	43
16	Brittle-layer-tuned microcrack propagation for high-performance stretchable strain sensors. Journal of Materials Chemistry C, 2021, 9, 7319-7327.	2.7	12
17	An on-demand plant-based actuator created using conformable electrodes. Nature Electronics, 2021, 4, 134-142.	13.1	81
18	Biomimetic Impact Protective Supramolecular Polymeric Materials Enabled by Quadruple H-Bonding. Journal of the American Chemical Society, 2021, 143, 1162-1170.	6.6	85

#	ARTICLE	IF	CITATIONS
19	Flexible electronics based on 2D transition metal dichalcogenides. Journal of Materials Chemistry A, 2021, 10, 89-121.	5.2	66
20	Mixed EDD and MEDD: A Low-Jerk Control Method For Semi-Active Suspension. , 2021, , .		0
21	Photothermal Janus Anode with Photosynthesisâ€Šhielding Effect for Activating Lowâ€Štemperature Biological Wastewater Treatment. Advanced Functional Materials, 2020, 30, 1909432.	7.8	14
22	Horizons Community Board Collection: Biosensors. Materials Horizons, 2020, 7, 2475-2476.	6.4	0
23	Improved Template Matching Based Stereo Vision Sparse 3D Reconstruction Algorithm. , 2020, , .		0
24	Polymeric Membranes with Selective Solutionâ€Šdiffusion for Intercepting Volatile Organic Compounds during Solarâ€ŠDriven Water Remediation. Advanced Materials, 2020, 32, e2004401.	11.1	142
25	An Onâ€Šskin Electrode with Antiâ€Šepidermalâ€Šsurfaceâ€Šlipid Function Based on a Zwitterionic Polymer Brush. Advanced Materials, 2020, 32, e2001130.	11.1	74
26	Ride Comfort Optimization via Speed Planning and Preview Semi-Active Suspension Control for Autonomous Vehicles on Uneven Roads. IEEE Transactions on Vehicular Technology, 2020, 69, 8343-8355.	3.9	54
27	Photothermal Janus Anodes: Photothermal Janus Anode with Photosynthesisâ€Šhielding Effect for Activating Lowâ€Štemperature Biological Wastewater Treatment (Adv. Funct. Mater. 7/2020). Advanced Functional Materials, 2020, 30, 2070045.	7.8	1
28	Identification of Upper-Limb Movements Based on Muscle Shape Change Signals for Human-Robot Interaction. Computational and Mathematical Methods in Medicine, 2020, 2020, 1-14.	0.7	10
29	Waterâ€ŠResistant Conformal Hybrid Electrodes for Aquatic Endurable Electrocardiographic Monitoring. Advanced Materials, 2020, 32, e2001496.	11.1	146
30	Vehicle Safety and Comfort Control base on Semi-Active Suspension. , 2020, , .		1
31	Broadband Extrinsic Selfâ€Štrapped Exciton Emission in Snâ€ŠDoped 2D Leadâ€ŠHalide Perovskites. Advanced Materials, 2019, 31, e1806385.	11.1	198
32	Two-Time-Scale Redesign for Antilock Braking Systems of Ground Vehicles. IEEE Transactions on Industrial Electronics, 2019, 66, 4577-4586.	5.2	70
33	Design of a Piecewise Affine H_{∞} Controller for MR Semiactive Suspensions With Nonlinear Constraints. IEEE Transactions on Control Systems Technology, 2019, 27, 1762-1771.	3.2	17
34	Highly Stable and Stretchable Conductive Films through Thermalâ€Šradiationâ€ŠAssisted Metal Encapsulation. Advanced Materials, 2019, 31, e1901360.	11.1	96
35	Mechanocombinatorially Screening Sensitivity of Stretchable Strain Sensors. Advanced Materials, 2019, 31, e1903130.	11.1	82
36	Highâ€Štransconductance Stretchable Transistors Achieved by Controlled Gold Microcrack Morphology. Advanced Electronic Materials, 2019, 5, 1900347.	2.6	70

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37	Improved Rectangle Template Matching Based Feature Point Matching Algorithm. , 2019, , .		6
38	Comfort braking control for brake-by-wire vehicles. Mechanical Systems and Signal Processing, 2019, 133, 106255.	4.4	16
39	A novel motion control for ground vehicles with 4 independent wheel agents. , 2019, , .		0
40	Practical Static Output Feedback Control Methods for Constrained Piecewise Affine Systems: An Application in Vehicle Suspension Control. , 2019, , .		1
41	Lidar-IMU and Wheel Odometer Based Autonomous Vehicle Localization System. , 2019, , .		13
42	Electrical and thermal effects on electromechanical performance of stretchable thin gold films on PDMS substrates for stretchable electronics. Journal of Applied Physics, 2019, 125, .	1.1	6
43	A load-dependent PWA- \hat{z} controller for semi-active suspensions to exploit the performance of MR dampers. Mechanical Systems and Signal Processing, 2019, 127, 441-462.	4.4	28
44	Vehicle Sideslip Angle Estimation based on Switched Fuzzy Model. , 2019, , .		3
45	Gesture Recognition Based on Nano-gold Flexible Sensor using Different Training Modes. , 2019, , .		2
46	Heterogeneous Strain Distribution of Elastomer Substrates To Enhance the Sensitivity of Stretchable Strain Sensors. Accounts of Chemical Research, 2019, 52, 82-90.	7.6	52
47	Tactile Chemomechanical Transduction Based on an Elastic Microstructured Array to Enhance the Sensitivity of Portable Biosensors. Advanced Materials, 2019, 31, e1803883.	11.1	45
48	Plasticizing Silk Protein for On-Skin Stretchable Electrodes. Advanced Materials, 2018, 30, e1800129.	11.1	230
49	Auxetic Mechanical Metamaterials to Enhance Sensitivity of Stretchable Strain Sensors. Advanced Materials, 2018, 30, e1706589.	11.1	349
50	Mechano-Based Transductive Sensing for Wearable Healthcare. Small, 2018, 14, e1702933.	5.2	91
51	Mediating Short-Term Plasticity in an Artificial Memristive Synapse by the Orientation of Silica Mesopores. Advanced Materials, 2018, 30, e1706395.	11.1	100
52	Quadruple H-Bonding Cross-Linked Supramolecular Polymeric Materials as Substrates for Stretchable, Antitearing, and Self-Healable Thin Film Electrodes. Journal of the American Chemical Society, 2018, 140, 5280-5289.	6.6	464
53	Coordinated Longitudinal and Lateral Motion Control for Four Wheel Independent Motor-Drive Electric Vehicle. IEEE Transactions on Vehicular Technology, 2018, 67, 3782-3790.	3.9	96
54	Multi-Objective Optimal Control Allocation for an Over-Actuated Electric Vehicle. IEEE Access, 2018, 6, 4824-4833.	2.6	35

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55	Motor Torque Fault Diagnosis for Four Wheel Independent Motor-Drive Vehicle Based on Unscented Kalman Filter. IEEE Transactions on Vehicular Technology, 2018, 67, 1969-1976.	3.9	29
56	Surface Strain Redistribution on Structured Microfibers to Enhance Sensitivity of Fiber-Shaped Stretchable Strain Sensors. Advanced Materials, 2018, 30, 1704229.	11.1	208
57	A Novel Piecewise Affine Model for Vehicle Lateral Dynamics. IEEE Access, 2018, 6, 78493-78502.	2.6	4
58	A Novel Flexible Sensor for Muscle Shape Change Monitoring in Limb Motion Recognition. , 2018, 2018, 4665-4668.		6
59	Honeycomb-Inspired 3D Stretchable Supercapacitors with Enhanced Specific Areal Capacitance. Advanced Materials, 2018, 30, e1805468.	11.1	152
60	3D-Structured Stretchable Strain Sensors for Out-of-Plane Force Detection. Advanced Materials, 2018, 30, e1707285.	11.1	86
61	Stretchable Conductive Fibers Based on a Cracking Control Strategy for Wearable Electronics. Advanced Functional Materials, 2018, 28, 1801683.	7.8	100
62	CoFe ₂ O ₄ Nanocrystals Mediated Crystallization Strategy for Magnetic Functioned ZSM-5 Catalysts. Advanced Functional Materials, 2018, 28, 1802088.	7.8	15
63	A Novel Design of Traction Control Based on a Piecewise-Linear Parameter-Varying Technique for Electric Vehicles With In-Wheel Motors. IEEE Transactions on Vehicular Technology, 2018, 67, 9324-9336.	3.9	18
64	State-of-Charge Estimation for Lithium-Ion Batteries Based on a Nonlinear Fractional Model. IEEE Transactions on Control Systems Technology, 2017, 25, 3-11.	3.2	121
65	Elastic substrates for stretchable devices. MRS Bulletin, 2017, 42, 103-107.	1.7	39
66	Hierarchical control strategy of trajectory tracking for intelligent vehicle. Journal of Shanghai Jiaotong University (Science), 2017, 22, 224-232.	0.5	4
67	Stretchable Motion Memory Devices Based on Mechanical Hybrid Materials. Advanced Materials, 2017, 29, 1701780.	11.1	68
68	Design and evaluation of path following controller based on MPC for autonomous vehicle. , 2017, , .		15
69	High-Adhesion Stretchable Electrodes Based on Nanopile Interlocking. Advanced Materials, 2017, 29, 1603382.	11.1	168
70	Adaptive sliding mode observer for updating maps with an application to mass air flow sensors in diesel engines. Transactions of the Institute of Measurement and Control, 2017, 39, 1885-1897.	1.1	4
71	Design of Architectures and Materials in In-Plane Micro-supercapacitors: Current Status and Future Challenges. Advanced Materials, 2017, 29, 1602802.	11.1	373
72	A Parameter Dependent Controller Design Approach for Delayed LPV System. Asian Journal of Control, 2017, 19, 391-398.	1.9	6

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73	Design and Experiment of Nonlinear Observer with Adaptive Gains for Battery State of Charge Estimation. <i>Energies</i> , 2017, 10, 2046.	1.6	8
74	Highly Stretchable, Compliant, Polymeric Microelectrode Arrays for In Vivo Electrophysiological Interfacing. <i>Advanced Materials</i> , 2017, 29, 1702800.	11.1	144
75	Orientational Coupling Locally Orchestrates a Cell Migration Pattern for Re-epithelialization. <i>Advanced Materials</i> , 2017, 29, 1700145.	11.1	33
76	Estimation of Individual Cylinder Air-Fuel Ratio in Gasoline Engine with Output Delay. <i>Journal of Sensors</i> , 2016, 2016, 1-9.	0.6	2
77	Alcohol-Mediated Resistance-Switching Behavior in Metal-Organic Framework-Based Electronic Devices. <i>Angewandte Chemie</i> , 2016, 128, 9030-9034.	1.6	19
78	Alcohol-Mediated Resistance-Switching Behavior in Metal-Organic Framework-Based Electronic Devices. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 8884-8888.	7.2	72
79	Observer design for incommensurate fractional systems. , 2016, , .		0
80	Memory Arrays: Skin-Inspired Haptic Memory Arrays with an Electrically Reconfigurable Architecture (<i>Adv. Mater.</i> 8/2016). <i>Advanced Materials</i> , 2016, 28, 1526-1526.	11.1	3
81	Soft Thermal Sensor with Mechanical Adaptability. <i>Advanced Materials</i> , 2016, 28, 9175-9181.	11.1	201
82	Bio-Inspired Mechanotactic Hybrids for Orchestrating Traction-Mediated Epithelial Migration. <i>Advanced Materials</i> , 2016, 28, 3102-3110.	11.1	66
83	Skin-Inspired Haptic Memory Arrays with an Electrically Reconfigurable Architecture. <i>Advanced Materials</i> , 2016, 28, 1559-1566.	11.1	173
84	Nanostructures: Highly Stretchable Gold Nanobelts with Sinusoidal Structures for Recording Electrocardiograms (<i>Adv. Mater.</i> 20/2015). <i>Advanced Materials</i> , 2015, 27, 3219-3219.	11.1	4
85	Self-Protection of Electrochemical Storage Devices via a Thermal Reversible Sol-Gel Transition. <i>Advanced Materials</i> , 2015, 27, 5593-5598.	11.1	94
86	Thickness-Gradient Films for High Gauge Factor Stretchable Strain Sensors. <i>Advanced Materials</i> , 2015, 27, 6230-6237.	11.1	300
87	An LPV Adaptive Observer for Updating a Map Applied to an MAF Sensor in a Diesel Engine. <i>Sensors</i> , 2015, 15, 27142-27159.	2.1	11
88	Fuel-air ratio control for a spark ignition engine using gain-scheduled delay-dependent approach. <i>IET Control Theory and Applications</i> , 2015, 9, 1810-1820.	1.2	10
89	Highly Stretchable Gold Nanobelts with Sinusoidal Structures for Recording Electrocardiograms. <i>Advanced Materials</i> , 2015, 27, 3145-3151.	11.1	145
90	Suspended Wavy Graphene Microribbons for Highly Stretchable Microsupercapacitors. <i>Advanced Materials</i> , 2015, 27, 5559-5566.	11.1	268

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91	Output feedback controller design of discrete-time linear switching systems. Transactions of the Institute of Measurement and Control, 2014, 36, 47-57.	1.1	2
92	Vehicle Velocity and Roll Angle Estimation with Road and Friction Adaptation for Four-Wheel Independent Drive Electric Vehicle. Mathematical Problems in Engineering, 2014, 2014, 1-11.	0.6	14
93	A LPV traction control approach for independent in-wheel electric motor vehicle. , 2014, , .		3
94	Dispersed, Porous Nanoislands Landing on Stretchable Nanocrack Gold Films: Maintenance of Stretchability and Controllable Impedance. ACS Applied Materials & Interfaces, 2014, 6, 13487-13495.	4.0	40
95	A Path-Planning Algorithm for Automatic Parallel Parking. , 2013, , .		7
96	Controller and observer design for a class of discrete-time nonlinear switching systems. International Journal of Control, Automation and Systems, 2012, 10, 1193-1203.	1.6	7
97	State feedback stabilization of discrete linear switching systems subject to nonsymmetrical state and control bounds. Journal of Control Theory and Applications, 2012, 10, 216-222.	0.8	3
98	Robust observer-based control for uncertain discrete-time piecewise affine systems. Journal of Control Theory and Applications, 2012, 10, 236-243.	0.8	9
99	Vehicle yaw dynamics modelling and analyzing for yaw stability control. , 2011, , .		0
100	A Switched Control Strategy for Antilock Braking System With On/Off Valves. IEEE Transactions on Vehicular Technology, 2011, 60, 1470-1484.	3.9	83
101	Antishudder Gearshift Controller Design for Automatic Transmission. IEEE Transactions on Vehicular Technology, 2011, 60, 4261-4275.	3.9	14
102	Idle speed control of a 4-cylinder automotive engine using hybrid system method. , 2011, , .		0
103	ISS-based vehicle yaw stability controller design in backstepping framework. , 2011, , .		0
104	On min-max feasible cooperation-based distributed model predictive control. , 2011, , .		1
105	LMI-based robust control of uncertain discrete-time piecewise affine systems. Journal of Control Theory and Applications, 2010, 8, 496-502.	0.8	5
106	Vehicle Yaw Stability-Control System Design Based on Sliding Mode and Backstepping Control Approach. IEEE Transactions on Vehicular Technology, 2010, 59, 3674-3678.	3.9	67
107	Static output feedback control of the linear system with parameter uncertainties. , 2010, , .		3
108	Stabilizing controller design for uncertain discrete-time linear switching systems with non-symmetrical constrained control. , 2010, , .		0

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109	Integrated Powertrain Control of Gearshift for Automatic Transmission. , 2010, , .		2
110	Non-synchronized H _∞ estimation of discrete-time piecewise affine systems: An LMI approach. , 2009, , .		0
111	The recognition of working condition of cement rotary kiln based on information fusion. , 2009, , .		0
112	Design of vehicle yaw stability controller based on model predictive control. , 2009, , .		12
113	A new multi-model internal model control scheme based on neural network. , 2008, , .		2
114	LMI-based H _∞ control scheme for discrete-time piecewise affine systems. , 2008, , .		0
115	Pinch detection algorithm based on sliding mode estimator for automotive power window. , 2008, , .		0
116	Delay-dependent Guaranteed Cost Control for Uncertain Nonlinear Discrete-time Systems. , 2007, , .		0
117	An Approach to Fluctuation Modeling and Filter Design of Vehicle Oil Tank. , 2006, , .		0
118	Distributed robust control of multiple mobile robots formations via moving horizon strategy. , 2006, , .		1
119	Robust Output Feedback H _∞ Control for Uncertain Discrete-Time Systems with Actuator Constrained. , 2006, , .		2
120	A Study on Robust Estimation via Moving Horizon Strategy. , 2003, , .		0
121	Robust two-degree-of-freedom internal model control. , 0, , .		2
122	A moving horizon estimation approach to constrained linear system with uncertain model. , 0, , .		2
123	An approach to integral input-to-state stabilization via satisficing strategy. , 0, , .		0
124	Estimation of vehicle speed and friction force using moving horizon strategy. , 0, , .		4
125	Inverse optimal constrained input-to-state stabilization of nonlinear systems. , 0, , .		0
126	Localizing epileptic focus and assessing electrical stimulus effects on epilepsy in rats using stretchable micro electrocorticogram electrodes. Science China Materials, 0, , .	3.5	2