

CITATION REPORT

List of articles citing

Wireless Communications Through Reconfigurable Intelligent Surfaces

DOI: 10.1109/access.2019.2935192
IEEE Access, 2019, 7, 116753-116773.

Source: <https://exaly.com/paper-pdf/71932361/citation-report.pdf>

Version: 2024-04-17

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
1229	Engineering the Eigenspace Structure of Massive MIMO Links Through Frequency-Selective Surfaces. 2019 , 18, 2701-2705		4
1228	. 2019 ,		25
1227	Intelligent Reflecting Surface for Downlink Non-Orthogonal Multiple Access Networks. 2019 ,		67
1226	Reconfigurable Intelligent Surface for Green Edge Inference in Machine Learning. 2019 ,		17
1225	Symbol-Level Precoding Design for Intelligent Reflecting Surface Assisted Multi-User MIMO Systems. 2019 ,		14
1224	Intelligent Reflecting Surfaces: Physics, Propagation, and Pathloss Modeling. 2020 , 9, 581-585		184
1223	Weighted Sum Power Maximization for Intelligent Reflecting Surface Aided SWIPT. 2020 , 9, 586-590		180
1222	. 2020 ,		14
1221	Smart and Secure Wireless Communications via Reflecting Intelligent Surfaces: A Short Survey. 2020 , 1, 1442-1456		29
1220	Guest Editorial Special Issue on Wireless Networks Empowered by Reconfigurable Intelligent Surfaces. 2020 , 38, 2445-2449		1
1219	Intelligent Reflecting Surface with Discrete Phase Shifts: Channel Estimation and Passive Beamforming. 2020 ,		36
1218	Reconfigurable Intelligent Surfaces: Bridging the Gap Between Scattering and Reflection. 2020 , 38, 2538-2547	37	
1217	Large Intelligent Surface Assisted Wireless Communications With Spatial Modulation and Antenna Selection. 2020 , 38, 2562-2574		25
1216	Reconfigurable Intelligent Surface Assisted Two-Way Communications: Performance Analysis and Optimization. 2020 , 68, 6552-6567		72
1215	. 2020 , 38, 2450-2525		525
1214	Reflecting Modulation. 2020 , 38, 2548-2561		43
1213	Analytical Modeling of the Path-Loss for Reconfigurable Intelligent Surfaces [Anomalous Mirror or Scatterer?]. 2020 ,		40

1212	. 2020,	34
1211	Passive Information Transmission in Intelligent Reflecting Surface Aided MISO Systems. 2020, 24, 2951-2955	8
1210	Design and Implementation of MIMO Transmission through Reconfigurable Intelligent Surface. 2020,	2
1209	Indoor Mixed Dual-Hop VLC/RF Systems Through Reconfigurable Intelligent Surfaces. 2020, 9, 1995-1999	16
1208	Passive Intelligent Surface Assisted MIMO Powered Sustainable IoT. 2020,	4
1207	Leveraging UAVs with Intelligent Reflecting Surfaces for Energy-Efficient Communications with Cell-Edge Users. 2020,	18
1206	. 2020, 9, 1985-1989	46
1205	Large Intelligent Surface for Positioning in Millimeter Wave MIMO Systems. 2020,	35
1204	Coordinated Passive Beamforming for Distributed Intelligent Reflecting Surfaces Network. 2020,	16
1203	Adaptive Beamforming Design for mmWave RIS-Aided Joint Localization and Communication. 2020	44
1202	An Electromagnetic Framework for the Deployment of Reconfigurable Intelligent Surfaces to Control Massive MIMO Channel Characteristics. 2020,	2
1201	Reconfigurable Intelligent Surface Enabled IoT Networks in Generalized Fading Channels. 2020,	17
1200	Deep Reinforcement Learning for Energy-Efficient Networking with Reconfigurable Intelligent Surfaces. 2020,	19
1199	Extremum Seeking Control for Beam Steering using Hypersurfaces. 2020,	3
1198	RIS-Aided Offshore Communications with Adaptive Beamforming and Service Time Allocation. 2020	4
1197	Intelligent Reflecting Surface Assisted Massive MIMO Communications. 2020,	5
1196	6G Wireless Communication Systems: Applications, Requirements, Technologies, Challenges, and Research Directions. 2020, 1, 957-975	232
1195	Channel Estimation and Passive Beamforming for Intelligent Reflecting Surface: Discrete Phase Shift and Progressive Refinement. 2020, 38, 2604-2620	129

1194	Processing Distribution and Architecture Tradeoff for Large Intelligent Surface Implementation. 2020,		3
1193	Low Complexity Adaptation for Reconfigurable Intelligent Surface-Based MIMO Systems. 2020, 24, 2946-2950		16
1192	Linear Precoder Design for Physical Layer Security via Reconfigurable Intelligent Surfaces. 2020,		2
1191	Optimizing Over-the-Air Computation in IRS-Aided C-RAN Systems. 2020,		8
1190	On the Rate and Energy Efficiency Comparison of Reconfigurable Intelligent Surfaces with Relays. 2020,		3
1189	Enabling Panoramic Full-Angle Reflection Via Aerial Intelligent Reflecting Surface. 2020,		27
1188	Asymptotic Optimality of Reconfigurable Intelligent Surfaces: Passive Beamforming and Achievable Rate. 2020,		10
1187	Intelligent Reflecting Surface: Practical Phase Shift Model and Beamforming Optimization. 2020,		34
1186	High-Resolution Channel Estimation for Intelligent Reflecting Surface-Assisted MmWave Communications. 2020,		4
1185	Intelligent Time-Varying Metasurface Transceiver for Index Modulation in 6G Wireless Networks. 2020, 19, 1891-1895		11
1184	Wireless 2.0: Toward an Intelligent Radio Environment Empowered by Reconfigurable Meta-Surfaces and Artificial Intelligence. 2020, 15, 74-82		24
1183	Inkjet-Printed Electronics on Paper for RF Identification (RFID) and Sensing. 2020, 9, 1636		10
1182	. 2020, 15, 52-61		68
1181	mmWave Doubly-Massive-MIMO Communications Enhanced With an Intelligent Reflecting Surface: Asymptotic Analysis. <i>IEEE Access</i> , 2020, 8, 183774-183786	3-5	8
1180	RIS-Assisted Coverage Enhancement in Millimeter-Wave Cellular Networks. <i>IEEE Access</i> , 2020, 8, 1881713-1881859		15
1179	Intelligent Surfaces for 6G Wireless Networks: A Survey of Optimization and Performance Analysis Techniques. <i>IEEE Access</i> , 2020, 8, 202795-202818	3-5	52
1178	Reconfigurable Surface Assisted Multi-User Opportunistic Beamforming. 2020,		2
1177	On the Capacity of Intelligent Reflecting Surface Aided MIMO Communication. 2020,		3

1176	Beyond 5G Wireless Localization with Reconfigurable Intelligent Surfaces. 2020,	19
1175	Deep Reinforcement Learning for Intelligent Reflecting Surfaces: Towards Standalone Operation. 2020,	42
1174	A Framework of Robust Transmission Design for IRS-Aided MISO Communications With Imperfect Cascaded Channels. 2020, 68, 5092-5106	141
1173	Analysis and Optimization of an Intelligent Reflecting Surface-Assisted System With Interference. 2020, 19, 8068-8082	24
1172	Smart dipole arrays for radio channel enhancement. 2020,	0
1171	Power Scaling Laws and Near-Field Behaviors of Massive MIMO and Intelligent Reflecting Surfaces. 2020, 1, 1306-1324	93
1170	Risk-Based Optimization of Virtual Reality over Terahertz Reconfigurable Intelligent Surfaces. 2020	26
1169	Intelligent Reflecting Surfaces With Spatial Modulation: An Electromagnetic Perspective. 2020, 1, 1256-1266	12
1168	Intelligent Reflecting Surface Assisted Multi-User OFDMA: Channel Estimation and Training Design. 2020, 19, 8315-8329	110
1167	Channel Estimation for Reconfigurable Intelligent Surface Aided Massive MIMO System. 2020,	12
1166	. 2020, 68, 7170-7183	66
1165	Joint Transmit and Reflective Beamforming Design for IRS-Assisted Multiuser MISO SWIPT Systems. 2020,	29
1164	How Much do Hardware Imperfections Affect the Performance of Reconfigurable Intelligent Surface-Assisted Systems?. 2020, 1, 1185-1195	22
1163	Security in Energy Harvesting Networks: A Survey of Current Solutions and Research Challenges. 2020, 22, 2658-2693	12
1162	Large Intelligent Surface Aided Multiuser MIMO: Passive Beamforming and Information Transfer. 2020,	4
1161	Reconfigurable Intelligent Surfaces Assisted MIMO-MAC with Partial CSI. 2020,	4
1160	Broadband Channel Estimation for Intelligent Reflecting Surface Aided mmWave Massive MIMO Systems. 2020,	32
1159	Performance Analysis of Intelligent Reflective Surfaces for Wireless Communication. 2020,	31

1158	A Fisher Information Analysis of Joint Localization and Synchronization in near Field. 2020 ,		4
1157	Outage Performance Analysis of Reconfigurable Intelligent Surfaces-Aided NOMA Under Presence of Hardware Impairment. <i>IEEE Access</i> , 2020 , 8, 212156-212165	3.5	20
1156	Joint Beamforming and Phase-Shifting Optimization in MISO with RIS-Assisted Communication. 2020 ,		
1155	Indoor Visible Light Communication: A Tutorial and Survey. 2020 , 2020, 1-46		12
1154	Bibliography. 2020 , 191-201		
1153	Wireless on Walls: Revolutionizing the Future of Health Care. 2020 , 0-0		2
1152	WITHDRAWN: Modern art network communication based on FPGA and convolutional neural network. 2020 , 103498		1
1151	Performance Evaluation of Reconfigurable Intelligent Surface Assisted D-band Wireless Communication. 2020 ,		5
1150	. 2020 ,		23
1149	Reconfigurable intelligent surface assisted mobile network with randomly moving user over Fisher-Snedecor fading channel. 2020 , 43, 101186		8
1148	Ergodic capacity analysis of reconfigurable intelligent surface assisted wireless systems. 2020 ,		10
1147	Instantaneous, Zero-Feedback Fading Mitigation with Simple Backscatter Radio Tags. 2020 , 1-1		0
1146	Reconfigurable Intelligent Surfaces With Reflection Pattern Modulation: Beamforming Design and Performance Analysis. 2020 , 1-1		45
1145	A Waveform Parameter Assignment Framework for 6G With the Role of Machine Learning. 2020 , 1, 156-172		6
1144	Asymptotic Max-Min SINR Analysis of Reconfigurable Intelligent Surface Assisted MISO Systems. 2020 , 19, 7748-7764		157
1143	Reconfigurable Intelligent Surface-Aided Grant-Free Access for Uplink URLLC. 2020 ,		7
1142	Reconfigurable Intelligent Surface-Assisted Space Shift Keying. 2020 , 9, 1495-1499		27
1141	5G Key Technologies for Smart Railways. 2020 , 108, 856-893		83

1140	Robust Beamforming Design for Intelligent Reflecting Surface Aided MISO Communication Systems. 2020 , 9, 1658-1662	98
1139	Passive Beamforming and Information Transfer Design for Reconfigurable Intelligent Surfaces Aided Multiuser MIMO Systems. 2020 , 38, 1793-1808	72
1138	Intelligent Reflecting Surface: Practical Phase Shift Model and Beamforming Optimization. 2020 , 68, 5849-5863	197
1137	Cooperative Double-IRS Aided Communication: Beamforming Design and Power Scaling. 2020 , 9, 1206-1210	51
1136	Toward Smart Wireless Communications via Intelligent Reflecting Surfaces: A Contemporary Survey. 2020 , 22, 2283-2314	216
1135	TwoWay Communications via Reconfigurable Intelligent Surface. 2020 ,	3
1134	Symbol-Level Precoding Design for IRS-assisted MU-MISO Systems. 2020 ,	4
1133	Compressed Channel Estimation for Intelligent Reflecting Surface-Assisted Millimeter Wave Systems. 2020 , 27, 905-909	121
1132	A Hybrid Relay and Intelligent Reflecting Surface Network and Its Ergodic Performance Analysis. 2020 , 9, 1653-1657	38
1131	Bit Error Probability for Large Intelligent Surfaces Under Double-Nakagami Fading Channels. 2020 , 1, 750-759	24
1130	Hybrid Precoding for Secure Transmission in Reflect-Array-Assisted Massive MIMO Systems. 2020 ,	3
1129	Outage Minimization for Intelligent Reflecting Surface Aided MISO Communication Systems via Stochastic Beamforming. 2020 ,	2
1128	Two-timescale Beamforming Optimization for Intelligent Reflecting Surface Enhanced Wireless Network. 2020 ,	8
1127	Service-aware 6G: An intelligent and open network based on the convergence of communication, computing and caching. 2020 , 6, 253-260	59
1126	Performance Analysis of Large Intelligent Surface Aided Backscatter Communication Systems. 2020 , 1-1	32
1125	Reconfigurable Intelligent Surface-Based Wireless Communications: Antenna Design, Prototyping, and Experimental Results. <i>IEEE Access</i> , 2020 , 8, 45913-45923	3-5 190
1124	Wireless Communications with Programmable Metasurface: New Paradigms, Opportunities, and Challenges on Transceiver Design. 2020 , 27, 180-187	96
1123	. <i>IEEE Access</i> , 2020 , 8, 109440-109452	3-5 9

1122	On the Performance of RIS-Assisted Dual-Hop UAV Communication Systems. 2020 , 69, 10385-10390	92
1121	Channel Estimation for Intelligent Reflecting Surface Assisted Multiuser Communications. 2020 ,	26
1120	Capacity Characterization for Intelligent Reflecting Surface Aided MIMO Communication. 2020 , 38, 1823-1838	207
1119	Intelligent Reflecting Surface-Assisted Secure Multi-Input Single-Output Cognitive Radio Transmission. 2020 , 20,	3
1118	Deep Denoising Neural Network Assisted Compressive Channel Estimation for mmWave Intelligent Reflecting Surfaces. 2020 , 69, 9223-9228	84
1117	Physical Layer Security in Vehicular Networks with Reconfigurable Intelligent Surfaces. 2020 ,	29
1116	Toward Intelligent Metasurfaces: The Progress from Globally Tunable Metasurfaces to Software-Defined Metasurfaces with an Embedded Network of Controllers. 2020 , 8, 2000783	66
1115	Adaptive Transmission for Reconfigurable Intelligent Surface-Assisted OFDM Wireless Communications. 2020 , 38, 2653-2665	48
1114	MIMO Detection for Reconfigurable Intelligent Surface-Assisted Millimeter Wave Systems. 2020 , 38, 1777-1792	23
1113	Secrecy Performance Analysis of RIS-Aided Wireless Communication Systems. 2020 , 69, 12296-12300	77
1112	Reconfigurable Intelligent Surfaces vs. Relaying: Differences, Similarities, and Performance Comparison. 2020 , 1, 798-807	221
1111	Hybrid Beamforming for Reconfigurable Intelligent Surface based Multi-User Communications: Achievable Rates With Limited Discrete Phase Shifts. 2020 , 38, 1809-1822	163
1110	. 2020 , 38, 2683-2699	101
1109	Joint Design of Reconfigurable Intelligent Surfaces and Transmit Beamforming Under Proper and Improper Gaussian Signaling. 2020 , 38, 2589-2603	17
1108	Spatial Throughput Characterization for Intelligent Reflecting Surface Aided Multiuser System. 2020 , 9, 834-838	41
1107	Reconfigurable Intelligent Surface Assisted UAV Communication: Joint Trajectory Design and Passive Beamforming. 2020 , 9, 716-720	199
1106	What should 6G be?. 2020 , 3, 20-29	401
1105	IRS-Enhanced OFDMA: Joint Resource Allocation and Passive Beamforming Optimization. 2020 , 9, 760-764	55

1104	GMD-Based Hybrid Beamforming for Large Reconfigurable Intelligent Surface Assisted Millimeter-Wave Massive MIMO. <i>IEEE Access</i> , 2020 , 8, 19530-19539	3.5	51
1103	Reconfigurable Intelligent Surface-Based Index Modulation: A New Beyond MIMO Paradigm for 6G. 2020 , 68, 3187-3196		213
1102	Weighted Sum-Rate Maximization for Reconfigurable Intelligent Surface Aided Wireless Networks. 2020 , 19, 3064-3076		217
1101	Sixth Generation (6G) Wireless Networks: Vision, Research Activities, Challenges and Potential Solutions. 2020 , 12, 676		88
1100	The Use of Meta-Surfaces in Vehicular Networks. 2020 , 9, 15		24
1099	Mixed Dual-Hop FSO-RF Communication Systems Through Reconfigurable Intelligent Surface. 2020 , 24, 1558-1562		43
1098	Intelligent Reflecting Surface for Massive Device Connectivity: Joint Activity Detection and Channel Estimation. 2020 ,		17
1097	Practical Modeling and Beamforming for Intelligent Reflecting Surface Aided Wideband Systems. 2020 , 24, 1568-1571		24
1096	Coverage, Probability of SNR Gain, and DOR Analysis of RIS-Aided Communication Systems. 2020 , 9, 1268-1272	51	
1095	Wireless Power Transfer Empowered by Reconfigurable Intelligent Surfaces. 2021 , 15, 2121-2124		11
1094	Joint Symbol-Level Precoding and Reflecting Designs for IRS-Enhanced MU-MISO Systems. 2021 , 20, 798-811		20
1093	Optimization of Wireless Relaying With Flexible UAV-Borne Reflecting Surfaces. 2021 , 69, 309-325		49
1092	Secure Beamforming for Multiple Intelligent Reflecting Surfaces Aided mmWave Systems. 2021 , 25, 417-421		4
1091	Joint Beamforming Design in Multi-Cluster MISO NOMA Reconfigurable Intelligent Surface-Aided Downlink Communication Networks. 2021 , 69, 664-674		35
1090	Robust Probabilistic-Constrained Optimization for IRS-Aided MISO Communication Systems. 2021 , 10, 1-5		13
1089	. 2021 , 20, 2-17		82
1088	Intelligent Reflecting Surface Operation Under Predictable Receiver Mobility: A Continuous Time Propagation Model. 2021 , 10, 216-220		22
1087	Indoor Localization With Reconfigurable Intelligent Surface. 2021 , 25, 161-165		12

1086	. 2021 , 8, 4618-4627	48
1085	Beamforming Design for Multiuser Transmission Through Reconfigurable Intelligent Surface. 2021 , 69, 589-601	28
1084	. 2021 , 20, 421-439	272
1083	Physical Layer Security of Large Reflecting Surface Aided Communications With Phase Errors. 2021 , 10, 325-329	11
1082	On Spatial Multiplexing Using Reconfigurable Intelligent Surfaces. 2021 , 10, 226-230	7
1081	Ergodic Secrecy Rate of RIS-Assisted Communication Systems in the Presence of Discrete Phase Shifts and Multiple Eavesdroppers. 2021 , 10, 629-633	16
1080	Visible Light Communications via Intelligent Reflecting Surfaces: Metasurfaces vs Mirror Arrays. 2021 , 2, 1-20	29
1079	Beamforming Optimization for IRS-Aided Communications With Transceiver Hardware Impairments. 2021 , 69, 1214-1227	31
1078	Intelligent Reflecting Surface-Aided Joint Processing Coordinated Multipoint Transmission. 2021 , 69, 1650-1665	41
1077	Multidimensional Index Modulation for 5G and Beyond Wireless Networks. 2021 , 109, 170-199	19
1076	On the Optimal Number of Reflecting Elements for Reconfigurable Intelligent Surfaces. 2021 , 10, 464-468	14
1075	Wireless Communication via Double IRS: Channel Estimation and Passive Beamforming Designs. 2021 , 10, 431-435	38
1074	Joint Transmit Precoding and Reconfigurable Intelligent Surface Phase Adjustment: A Decomposition-Aided Channel Estimation Approach. 2021 , 69, 1228-1243	31
1073	Outage Probability and Capacity Scaling Law of Multiple RIS-Aided Networks. 2021 , 10, 256-260	24
1072	Joint Multi-Frequency Beam Shaping and Steering via SpaceTime-Coding Digital Metasurfaces. 2021 , 31, 2007620	21
1071	Reconfigurable Intelligent Surface Assisted Coordinated Multipoint in Downlink NOMA Networks. 2021 , 25, 632-636	24
1070	Joint Transceiver and Large Intelligent Surface Design for Massive MIMO mmWave Systems. 2021 , 20, 1052-1064	32
1069	Beamforming Through Reconfigurable Intelligent Surfaces in Single-User MIMO Systems: SNR Distribution and Scaling Laws in the Presence of Channel Fading and Phase Noise. 2021 , 10, 77-81	42

1068	Reconfigurable Intelligent Surface-Empowered MIMO Systems. 2021 , 15, 4358-4366	15
1067	Intelligent Reflecting Surface Aided Multicasting With Random Passive Beamforming. 2021 , 10, 92-96	17
1066	A Multi-Functional Reconfigurable Metasurface: Electromagnetic Design Accounting for Fabrication Aspects. 2021 , 69, 1440-1454	31
1065	On the ergodic capacities of decode-and-forward MIMO relay network with simultaneous wireless information and power transfer. 2021 , 32,	2
1064	Sum Rate Maximization for IRS-Assisted Uplink NOMA. 2021 , 25, 234-238	65
1063	Exploiting Randomly Located Blockages for Large-Scale Deployment of Intelligent Surfaces. 2021 , 39, 1043-1056	34
1062	RISMA: Reconfigurable Intelligent Surfaces Enabling Beamforming for IoT Massive Access. 2021 , 39, 1072-1085	20
1061	. 2021 , 1-1	23
1060	. 2021 , 1-1	9
1059	Reconfigurable Intelligent Surface Aided Constant-Envelope Wireless Power Transfer. 2021 , 69, 1347-1361	19
1058	Generalized Coordinated Multipoint Framework for 5G and Beyond. <i>IEEE Access</i> , 2021 , 9, 72499-72515	3.5 3
1057	Stochastic Geometry Analysis of Spatial-Temporal Performance in Wireless Networks: A Tutorial. 2021 , 1-1	7
1056	RIS Aided MIMO Communications. 2021 , 19-104	
1055	Performance Analysis of Multi-branch Reconfigurable Intelligent Surfaces-assisted Optical Wireless Communication System in Environment with Obstacles. 2021 , 1-1	14
1054	Ergodic Rate Analysis and IRS Configuration for Multi-IRS Dual-Hop DF Relaying Systems. 2021 , 1-1	2
1053	Cooperative Communications for Improving the Performance of Bidirectional Full-Duplex System With Multiple Reconfigurable Intelligent Surfaces. <i>IEEE Access</i> , 2021 , 1-1	3.5 2
1052	On the Achievable Rate Under Finite Codelength for RIS-Aided Systems. <i>IEEE Access</i> , 2021 , 9, 116369-116375	1
1051	Spatial Modulation for RIS-Assisted Uplink Communication: Joint Power Allocation and Passive Beamforming Design. 2021 , 1-1	5

1050	Asymptotic Analysis of Max-Min Weighted SINR for IRS-Assisted MISO Systems with Hardware Impairments. 2021 , 1-1		10
1049	Dimension Reduced Channel Feedback for Reconfigurable Intelligent Surface Aided Wireless Communications. 2021 , 1-1		9
1048	Reconfigurable Intelligent Surface Aided Power Control for Physical-Layer Broadcasting. 2021 , 1-1		4
1047	Modeling RIS Empowered Outdoor-to-Indoor Communication in mmWave Cellular Networks. 2021 , 1-1		12
1046	Active Reconfigurable Intelligent Surfaces-Aided Wireless Communication System. 2021 , 1-1		14
1045	Impact of Residual Hardware Impairment on the IoT Secrecy Performance of RIS-Assisted NOMA Networks. <i>IEEE Access</i> , 2021 , 9, 42583-42592	3.5	13
1044	Reconfigurable Intelligent Surfaces: Principles and Opportunities. 2021 , 23, 1546-1577		137
1043	On the Design of Complex EM Devices and Systems through the System-by-Design Paradigm - A Framework for Dealing with the Computational Complexity. 2021 , 1-1		10
1042	Energy-Efficient RIS-Assisted Satellites for IoT Networks. 2021 , 1-1		7
1041	A Vision and Framework for the High Altitude Platform Station (HAPS) Networks of the Future. 2021 , 23, 729-779		53
1040	Wideband Antennas. 2021 , 5-37		
1039	Energy Efficiency and Spectral Efficiency Tradeoff in RIS-Aided Multiuser MIMO Uplink Transmission. 2021 , 69, 1407-1421		50
1038	On Performance of Two-Way Full-Duplex Communication System With Reconfigurable Intelligent Surface. <i>IEEE Access</i> , 2021 , 9, 81274-81285	3.5	6
1037	Reflection Resource Management for Intelligent Reflecting Surface Aided Wireless Networks. 2021 , 1-1		6
1036	Cooperative Multi-RIS Communications for Wideband mmWave MISO-OFDM Systems. 2021 , 1-1		3
1035	A Reflection Type Phase Shifter for Reconfigurable Reflectarrays at 240 GHz. 2021 ,		0
1034	A Systematic Review on NOMA Variants for 5G and Beyond. <i>IEEE Access</i> , 2021 , 9, 85573-85644	3.5	18
1033	A Joint Precoding Framework for Wideband Reconfigurable Intelligent Surface-Aided Cell-Free Network. 2021 , 69, 4085-4101		44

1032	Radar Target Detection Aided by Reconfigurable Intelligent Surfaces. 2021 , 28, 1315-1319			19
1031	Exact Coverage Analysis of Intelligent Reflecting Surfaces With Nakagami-M Channels. 2021 , 70, 1072-1076			22
1030	Outage-Constrained Robust Beamforming for Intelligent Reflecting Surface Aided Wireless Communication. 2021 , 69, 1301-1316			17
1029	Health Risks Associated With 5G Exposure: A View From the Communications Engineering Perspective. 2021 , 2, 2131-2179			19
1028	Interference Suppression for Railway Wireless Communication Systems: A Reconfigurable Intelligent Surface Approach. 2021 , 1-1			7
1027	. 2021 , 2, 144-167			20
1026	Reconfigurable Intelligent Surfaces for N-LOS Radar Surveillance. 2021 , 1-1			12
1025	. 2021 , 1-1			15
1024	. <i>IEEE Access</i> , 2021 , 9, 26902-26925	3.5		60
1023	. <i>IEEE Access</i> , 2021 , 9, 92263-92275	3.5		6
1022	Analysis of Hierarchical Rate Splitting for Intelligent Reflecting Surfaces-Aided Downlink Multiuser MISO Communications. 2021 , 2, 785-798			9
1021	Terahertz Communication: Merits, Demerits, and Future Challenges Regarding 6G Wireless Networks. 2021 , 163-174			
1020	Enhanced Secrecy Rate Maximization for Directional Modulation Networks via IRS. 2021 , 1-1			9
1019	Exact Analysis of RIS-Aided THz Wireless Systems Over α -Fading with Pointing Errors. 2021 , 1-1			6
1018	A Survey of 6G Wireless Communications: Emerging Technologies. 2021 , 150-170			5
1017	Outage Analysis of Reconfigurable Intelligent Surface Aided MIMO Communications With Statistical CSI. 2021 , 1-1			7
1016	Analysis of Intelligent Reflecting Surface-Assisted mmWave Doubly Massive-MIMO Communications. 2021 ,			0
1015	Capacity Improvement in Reconfigurable Intelligent Surface Assisted MIMO Communications. <i>IEEE Access</i> , 2021 , 1-1	3.5		3

1014	Link Budget Analysis for Reconfigurable Smart Surfaces in Aerial Platforms. 2021 , 2, 1980-1995		5
1013	Assessing Wireless Sensing Potential With Large Intelligent Surfaces. 2021 , 2, 934-947		2
1012	Overhead-Aware Design of Reconfigurable Intelligent Surfaces in Smart Radio Environments. 2021 , 20, 126-141		58
1011	Achievable Rate Optimization for Aerial Intelligent Reflecting Surface-Aided Cell-Free Massive MIMO System. <i>IEEE Access</i> , 2021 , 9, 3828-3837	3.5	13
1010	Electromagnetic Model of Reflective Intelligent Surfaces. 2021 , 2, 1577-1589		7
1009	MetaLocalization: Reconfigurable Intelligent Surface Aided Multi-user Wireless Indoor Localization. 2021 , 1-1		25
1008	Convergences of RISs with Existing Wireless Technologies. 2021 , 105-160		
1007	Reconfigurable Intelligent Surface Assisted Cooperative Non-Orthogonal Multiple Access Systems. 2021 , 1-1		5
1006	Reconfigurable Intelligent Surface-Aided Quadrature Reflection Modulation for Simultaneous Passive Beamforming and Information Transfer. 2021 , 1-1		6
1005	Multi-Beam Multi-Hop Routing for Intelligent Reflecting Surfaces Aided Massive MIMO. 2021 , 1-1		10
1004	Intelligent Reflecting Surface Aided Dual-Function Radar and Communication System. 2021 , 1-12		23
1003	Stochastic Learning-Based Robust Beamforming Design for RIS-Aided Millimeter-Wave Systems in the Presence of Random Blockages. 2021 , 70, 1057-1061		19
1002	Wireless Communication, Sensing, and REM: A Security Perspective. 2021 , 2, 287-321		11
1001	Aerial Platforms with Reconfigurable Smart Surfaces for 5G and Beyond. 2021 , 59, 96-102		25
1000	RF Impairments in Wireless Transceivers: Phase Noise, CFO, and IQ Imbalance [A Survey]. <i>IEEE Access</i> , 2021 , 9, 111718-111791	3.5	11
999	Deep Learning for Optimization of Intelligent Reflecting Surface Assisted MISO Systems. 2021 , 390-395		
998	Distributed Beam Training for Intelligent Reflecting Surface Enabled Multi-Hop Routing. 2021 , 1-1		6
997	Sparse Code Multiple Access: Potentials and Challenges. 2021 , 1-1		5

996	. 2021 , 16, 1896-1911		8
995	Designing Wireless Powered Networks Assisted by Intelligent Reflecting Surfaces With Mechanical Tilt. 2021 , 1-1		0
994	An Efficient Approach of Improving Path Loss Models for Future Mobile Networks in Enclosed Indoor Environments. <i>IEEE Access</i> , 2021 , 9, 110332-110345	3.5	1
993	Ultra-Reliable Indoor Millimeter Wave Communications using Multiple Artificial Intelligence-Powered Intelligent Surfaces. 2021 , 1-1		0
992	Exploiting Reconfigurable Intelligent Surfaces in Edge Caching: Joint Hybrid Beamforming and Content Placement Optimization. 2021 , 1-1		5
991	Training Signal Design for Sparse Channel Estimation in Intelligent Reflecting Surface-Assisted Millimeter-Wave Communication. 2021 , 1-1		4
990	Reconfigurable Intelligent Surface Aided Multi-User Communications: State-of-the-Art Techniques and Open Issues. <i>IEEE Access</i> , 2021 , 9, 118584-118605	3.5	7
989	Wideband Channel Estimation for IRS-Aided Systems in the Face of Beam Squint. 2021 , 1-1		14
988	. <i>IEEE Access</i> , 2021 , 9, 71482-71504	3.5	6
987	Energy-Efficient Wireless Communications with Distributed Reconfigurable Intelligent Surfaces. 2021 , 1-1		32
986	RIS-Assisted Advanced Spatial Modulation Techniques for Ambient Backscattering Communications. 2021 , 1-1		4
985	TRICE: A Channel Estimation Framework for RIS-Aided Millimeter-Wave MIMO Systems. 2021 , 28, 513-517		19
984	Large Intelligent Surfaces With Discrete Set of Phase-Shifts Communicating Through Double-Rayleigh Fading Channels. <i>IEEE Access</i> , 2021 , 9, 20768-20787	3.5	13
983	Reconfigurable Intelligent Surfaces for Localization: Position and Orientation Error Bounds. 2021 , 1-1		39
982	Analytical Performance Assessment of Beamforming Efficiency in Reconfigurable Intelligent Surface-Aided Links. <i>IEEE Access</i> , 2021 , 9, 115922-115931	3.5	3
981	Cooperative Beam Routing for Multi-IRS Aided Communication. 2021 , 10, 426-430		26
980	Intrusion detection in mobile ad-hoc network using Hybrid Reactive Search and Bat algorithm. 2021 , ahead-of-print,		3
979	Max-Min Fairness in IRS-Aided Multi-Cell MISO Systems With Joint Transmit and Reflective Beamforming. 2021 , 20, 1379-1393		42

978	Terahertz Multi-User Massive MIMO With Intelligent Reflecting Surface: Beam Training and Hybrid Beamforming. 2021 , 70, 1376-1393	43
977	Physical-Layer Security Improvement with Reconfigurable Intelligent Surfaces for 6G Wireless Communication Systems. 2021 , 21,	4
976	Modeling and Analysis of Reconfigurable Intelligent Surfaces for Indoor and Outdoor Applications in Future Wireless Networks. 2021 , 69, 1290-1301	41
975	Reconfigurable Intelligent Surfaces for the Connectivity of Autonomous Vehicles. 2021 , 70, 2508-2513	10
974	6G Enabled Smart Infrastructure for Sustainable Society: Opportunities, Challenges, and Research Roadmap. 2021 , 21,	42
973	Optimal Reconfigurable Intelligent Surface Placement in Millimeter-Wave Communications. 2021 ,	2
972	Resource Allocation for Energy-Efficient Cellular Communications via Aerial IRS. 2021 ,	8
971	RIS-Assisted mmWave Channel Estimation Using Convolutional Neural Networks. 2021 ,	2
970	Channel Estimation for Intelligent Reflecting Surface Assisted Wireless Communications. 2021 ,	0
969	Performance Analysis of Wireless Networks with Intelligent Reflecting Surfaces. 2021 ,	2
968	Massive Access for 5G and Beyond. 2021 , 39, 615-637	167
967	Study of Reconfigurable Intelligent Surface Assisted Communications over Frequency Selected Channels. 2021 ,	
966	RIS-enabled mmWave Channel Sounding Based on Electronically Reconfigurable Transmitarrays. 2021 ,	0
965	Secure Two-Way Communications via Intelligent Reflecting Surfaces. 2021 , 25, 744-748	14
964	Deep Learning-Based Optimal RIS Interaction Exploiting Previously Sampled Channel Correlations. 2021 ,	2
963	On Coding and Decoding Reconfigurable Radiation Pattern Modulation Symbols. 2021 , 10, 614	1
962	MIMO links mediated by Reconfigurable Intelligent Surfaces. 2021 ,	0
961	Channel Modeling for IRS-Assisted FSO Systems. 2021 ,	5

960	System Performance Insights into Design of RIS-assisted Smart Radio Environments for 6G. 2021,	0
959	Intelligent Reflecting Surface Assisted Multi-cell Multi-band Wireless Networks. 2021,	2
958	A wireless communication scheme based on space- and frequency-division multiplexing using digital metasurfaces. 2021, 4, 218-227	74
957	. 2021,	2
956	. 2021, 69, 1493-1510	24
955	Intelligent Reflecting Surfaces for MIMO Communications in LoS Environments. 2021,	2
954	Reconfigurable Intelligent Surfaces based Cognitive Radio Networks. 2021,	5
953	Electromagnetic Wave Manipulation with Metamaterials and Metasurfaces for Future Communication Technologies. 2021, 179-203	0
952	On Half-Power Beamwidth of Intelligent Reflecting Surface. 2021, 25, 1333-1337	1
951	SNR Coverage Probability Analysis of RIS-Aided Communication Systems. 2021, 70, 3914-3919	12
950	Base Station and Passive Reflectors Placement for Urban mmWave Networks. 2021, 70, 3525-3539	6
949	Intelligent Reflective Surfaces State of the Art. 2021, 1-18	1
948	On outage performance of IRS-assisted wireless communication with user mobility following RWP model. 2021, 57, 457-459	0
947	Delay-Optimal Scheduling for IRS-Aided Mobile Edge Computing. 2021, 10, 740-744	21
946	Grand Challenges in Signal Processing for Communications. 2021, 1,	0
945	Enhanced Secure Wireless Information and Power Transfer via Intelligent Reflecting Surface. 2021, 25, 1084-1088	23
944	Wireless Channel and Interference. 2021, 267-323	2
943	Optimization algorithm of communication systems with intelligent reflecting surface for internet of things. 2021, 39, 454-461	2

942	Passive RIS vs. Hybrid RIS: A Comparative Study on Channel Estimation. 2021 ,	6
941	Millimeter Wave Communications With Reconfigurable Intelligent Surfaces: Performance Analysis and Optimization. 2021 , 69, 2752-2768	36
940	Design of Minimum Nonlinear Distortion Reconfigurable Antennas for Next-Generation Communication Systems. 2021 , 21,	0
939	Radiation Pattern Prediction for Metasurfaces: A Neural Network-Based Approach. 2021 , 21,	6
938	Optimal packet length for wireless communications using reconfigurable intelligent surfaces. 2021 , 77, 683-696	
937	. 2021 , 8, 5129-5140	12
936	Channel Estimation for Intelligent Reflecting Surface Assisted MIMO Systems: A Tensor Modeling Approach. 2021 , 15, 789-802	32
935	5G and EMF Exposure: Misinformation, Open Questions, and Potential Solutions. 2,	10
934	Outage Analysis of Uplink IRS-Assisted NOMA under Elements Splitting. 2021 ,	2
933	Bistatic Backscatter Communication: Shunt Network Design. 2021 , 8, 7691-7705	1
932	Space-Time-Coding Digital Metasurfaces: Principles and Applications. 2021 , 2021, 9802673	8
931	Hybrid RIS-Empowered Reflection and Decode-and-Forward Relaying for Coverage Extension. 2021 , 25, 1692-1696	21
930	Receive Quadrature Reflecting Modulation for RIS-Empowered Wireless Communications. 2021 , 70, 5121-5125	12
929	Designing Smart Electromagnetic Environments for Next-Generation Wireless Communications. 2021 , 2, 213-221	10
928	NOMA with energy harvesting using reconfigurable intelligent surfaces for Nakagami channels. 2021 , 15, 1837	0
927	Intelligent Reflecting Surface-Aided Wireless Communications: A Tutorial. 2021 , 69, 3313-3351	372
926	Reconfigurable Intelligent Surface in Wireless-Powered Interference-Limited Communication Networks. 2021 , 13, 960	5
925	Reconfigurable Intelligent Surfaces for Doppler Effect and Multipath Fading Mitigation. 2021 , 2,	10

924	Performance Analysis of RIS-Aided Systems With Practical Phase Shift and Amplitude Response. 2021 , 70, 4501-4511	14
923	Improving Physical Layer Security for Reconfigurable Intelligent Surface Aided NOMA 6G Networks. 2021 , 70, 4451-4463	19
922	Joint Channel Estimation and Passive Beamforming for Reconfigurable Intelligent Surface Aided Multi-user Massive MIMO System. 2021 ,	
921	. 2021 , 20, 3269-3283	10
920	Hybrid RF/FSO communications through Reconfigurable Intelligent Surfaces in the presence of pointing errors. 2021 , 78, 155-162	1
919	Reconfigurable Intelligent Surface Assisted Device-to-Device Communications. 2021 , 20, 2792-2804	24
918	Accurate Performance Analysis of Reconfigurable Intelligent Surfaces Over Rician Fading Channels. 2021 , 10, 1051-1055	16
917	Channel Estimation for RIS Assisted Wireless Communications Part I: Fundamentals, Solutions, and Future Opportunities. 2021 , 25, 1398-1402	23
916	Reconfigurable Intelligent Surfaces-Aided Physical Layer Security Enhancement in D2D Underlay Communications. 2021 , 25, 1443-1447	19
915	Large Intelligent Surfaces With Channel Estimation Overhead: Achievable Rate and Optimal Configuration. 2021 , 10, 986-990	9
914	Reconfigurable Intelligent Surface for Mixed FSO-RF Systems With Co-Channel Interference. 2021 , 25, 1605-1609	15
913	Sum-Rate Analysis of Intelligent Reflecting Surface Aided Multi-User Millimeter Wave Communications System. 2021 , 1921, 012050	0
912	A Survey for Recent Techniques and Algorithms of Geolocation and Target Tracking in Wireless and Satellite Systems. 2021 , 11, 6079	3
911	IRS Aided Communication Model for Compact MIMO Systems. 2021 ,	
910	Radio Positioning With EM Processing of the Spherical Wavefront. 2021 , 20, 3571-3586	17
909	Two-user SINR Region for Reconfigurable Intelligent Surface Aided Downlink Channel. 2021 ,	1
908	Reconfigurable Intelligent Surface for Green Edge Inference. 2021 , 5, 964-979	11
907	Toward the Use of Re-configurable Intelligent Surfaces in VLC Systems: Beam Steering. 2021 , 28, 156-162	13

906	Energy-efficient Joint Beamforming Design for IRS-assisted MISO System. 2021,	1
905	Near-Field Beamforming at Intelligent Re-Configurable Surface in Uplink Transmission. 2021,	
904	Channel Estimation Method and Phase Shift Design for Reconfigurable Intelligent Surface Assisted MIMO Networks. 2021, 7, 441-451	18
903	Reconfigurable Intelligent Surface Aided Mobile Edge Computing: From Optimization-Based to Location-Only Learning-Based Solutions. 2021, 69, 3709-3725	24
902	Intelligent Reflecting Surfaces at Terahertz Bands: Channel Modeling and Analysis. 2021,	7
901	Reconfigurable Intelligent Surface-Assisted Uplink Sparse Code Multiple Access. 2021, 25, 2058-2062	12
900	Transfer Learning Promotes 6G Wireless Communications: Recent Advances and Future Challenges. 2021, 70, 790-807	42
899	RIS-Aided Joint Localization and Synchronization with a Single-Antenna Mmwave Receiver. 2021,	11
898	Performance Analysis of Spatial and Frequency Domain Index-Modulated Reconfigurable Intelligent Metasurfaces. 2021,	0
897	RIS-Aided mmWave Transmission: A Stochastic Majorization-Minimization Approach. 2021,	2
896	. 2021, 69, 4216-4231	33
895	Alternating Beamforming With Intelligent Reflecting Surface Element Allocation. 2021, 10, 1232-1236	0
894	A 3D Non-Stationary Channel Model for 6G Wireless Systems Employing Intelligent Reflecting Surfaces With Practical Phase Shifts. 2021, 7, 496-510	9
893	A Novel RIS-Assisted Modulation Scheme. 2021, 10, 1359-1363	3
892	Performance Analysis for RIS-Assisted D2D Communication Under Nakagami- m Fading. 2021, 70, 5865-5879	4
891	Relay Reconfigurable Intelligent Surface Cooperation for Energy-Efficient Multiuser Systems. 2021,	3
890	Training Signal Design for Sparse Channel Estimation in Millimeter-Wave Communication with Intelligent Reflecting Surfaces. 2021,	1
889	Intercept Probability and Secrecy Capacity Analysis of RIS-based Wireless Communication with Full-duplex receiver. 2021,	0

888	Joint Beamforming Design Combined with Reconfigurable Intelligent Surface Selection. 2021,	0
887	Capacity Characterization of Intelligent Reflecting Surface Assisted NOMA Systems. 2021,	
886	Impact of IRS Phase Noise on Channel Estimation and Beamforming Design of Large MU-MISO Systems. 2021,	
885	. 2021, 69, 3771-3786	26
884	Millimeter Wave and Sub-Terahertz Spatial Statistical Channel Model for an Indoor Office Building. 2021, 39, 1561-1575	29
883	Multi-Hop RIS-Empowered Terahertz Communications: A DRL-Based Hybrid Beamforming Design. 2021, 39, 1663-1677	63
882	Reconfigurable Intelligent Surfaces for 6G Systems: Principles, Applications, and Research Directions. 2021, 59, 14-20	100
881	Reconfigurable Intelligent Surface Assisted Mobile Edge Computing With Heterogeneous Learning Tasks. 2021, 7, 369-382	19
880	. 2021, 20, 3597-3610	9
879	Reconfigurable Intelligent Surface Configuration and Deployment in Three-dimensional Scenarios. 2021,	0
878	On the Placement of Intelligent Surfaces for RSSI-Based Ranging in Mm-Wave Networks. 2021, 25, 2043-2047	7
877	Spectral Efficiency vs Complexity in Downlink Algorithms for Reconfigurable Intelligent Surfaces. 2021,	0
876	Several Key Technologies for 6G: Challenges and Opportunities. 2021, 5, 44-51	13
875	Channel Estimation for Full-Duplex RIS-assisted HAPS Backhauling with Graph Attention Networks. 2021,	4
874	Pathloss modeling of reconfigurable intelligent surface assisted THz wireless systems. 2021,	1
873	Radio Environment Map Enhanced Intelligent Reflecting Surface Systems Beyond 5G. 2021,	
872	Meta-Learning for 6G Communication Networks with Reconfigurable Intelligent Surfaces. 2021,	1
871	RIS Configuration, Beamformer Design, and Power Control in Single-Cell and Multi-Cell Wireless Networks. 2021, 7, 398-411	5

870	Joint Transmit Beamforming and Phase Shift Design for Reconfigurable Intelligent Surface Assisted MIMO Systems. 2021 , 7, 354-368	13
869	Max-Min Fair Energy-Efficient Beamforming Design for Intelligent Reflecting Surface-Aided SWIPT Systems With Non-Linear Energy Harvesting Model. 2021 , 70, 5848-5864	27
868	Energy-Efficient Resource Allocation for IRS-Assisted Multi-Antenna Uplink Systems. 2021 , 10, 1261-1265	9
867	Multi-Dimensional Polarized Modulation for Land Mobile Satellite Communications. 2021 , 7, 383-397	4
866	RIS Optimization on the Complex Circle Manifold for Interference Mitigation in Interference Channels. 2021 , 70, 6184-6189	8
865	Optimization of Reconfigurable Intelligent Surfaces Through Trace Maximization. 2021 ,	0
864	Wireless communication through reconfigurable intelligent surfaces with multi-antenna energy harvesting. 2021 , 15, 1881	1
863	Channel Modeling and Analysis of Reconfigurable Intelligent Surfaces Assisted Vehicular Networks. 2021 ,	3
862	Joint Admission Control and Beamforming for Intelligent Reflecting Surface Aided Wireless Networks. 2021 ,	2
861	On the Performance of RIS-Assisted Dual-Hop Mixed RF-UWOC Systems. 2021 , 7, 340-353	9
860	Efficient Channel Estimation for Double-IRS Aided Multi-User MIMO System. 2021 , 69, 3818-3832	36
859	RIS-Assisted Spatial Modulation and Space Shift Keying for Ambient Backscattering Communications. 2021 ,	4
858	A joint Computer Vision and Reconfigurable Intelligent Meta-surface Approach for Interference Reduction in Beyond 5G Networks. 2021 ,	1
857	. 2021 ,	2
856	SISO RIS-Enabled Joint 3D Downlink Localization and Synchronization. 2021 ,	9
855	Reconfigurable Intelligent Surfaces for Future Wireless Networks: A Channel Modeling Perspective. 2021 , 28, 108-114	17
854	Achievable Rate Optimization for MIMO Systems With Reconfigurable Intelligent Surfaces. 2021 , 20, 3865-3882	36
853	Capacity Analysis of IRS-Based UAV Communications With Imperfect Phase Compensation. 2021 , 10, 1479-1483	17

852	Performance Analysis of Reconfigurable Intelligent Surface-Aided Full-Duplex Cooperative NOMA System. 2021 , 2021, 1-13	
851	Multiplexing Gain of Modulating Phases Through Reconfigurable Intelligent Surface. 2021 ,	1
850	Intelligent Reflecting Surface Based Passive Information Transmission: A Symbol-Level Precoding Approach. 2021 , 70, 6735-6749	6
849	Achievable Rate Maximization for Intelligent Reflecting Surface-Assisted Orbital Angular Momentum-Based Communication Systems. 2021 , 70, 7277-7282	1
848	Fast Beam Training Technique for Millimeter-Wave Cellular Systems with an Intelligent Reflective Surface. 2021 , 21,	1
847	Intelligent Reflecting Surface (IRS)-Aided Covert Communication With Warden's Statistical CSI. 2021 , 10, 1449-1453	9
846	IRS-Assisted Localization for Airborne Mobile Networks. 2021 , 141-156	1
845	User Cooperation for RIS-aided Secure SWIPT MIMO Systems under the passive eavesdropping. 2021 ,	1
844	On the Optimality of Reconfigurable Intelligent Surfaces (RISs): Passive Beamforming, Modulation, and Resource Allocation. 2021 , 20, 4347-4363	22
843	Intelligent Reflecting Surface Assisted Wireless Powered Sensor Networks for Internet of Things. 2021 , 69, 4877-4889	30
842	Reconfigurable intelligent surfaces for smart wireless environments: channel estimation, system design and applications in 6G networks. 2021 , 64, 1	11
841	Secure Vehicular Communications Through Reconfigurable Intelligent Surfaces. 2021 , 70, 7272-7276	18
840	Hybrid RF/VLC Communications Using Reconfigurable Intelligent Surfaces. 1	0
839	Improvement of Student Attention Monitoring Supported by Precision Sensing in Learning Management Systems.	
838	Acquisition of channel state information for mmWave massive MIMO: traditional and machine learning-based approaches. 2021 , 64, 1	5
837	MetaSensing: Intelligent Metasurface Assisted RF 3D Sensing by Deep Reinforcement Learning. 2021 , 39, 2182-2197	11
836	Non Orthogonal Multiple Access Using Reconfigurable Intelligent Surfaces. 1	0
835	Double-IRS Assisted Multi-User MIMO: Cooperative Passive Beamforming Design. 2021 , 20, 4513-4526	40

834	Ris-Aided mmWave MIMO Radar System for Adaptive Multi-Target Localization. 2021 ,	2
833	Joint Scheduling of eMBB and URLLC Services in RIS-Aided Downlink Cellular Networks. 2021 ,	1
832	Weak Signal Detection in 5G+ Systems. 2021 ,	
831	Aerial Intelligent Reflecting Surface: Joint Placement and Passive Beamforming Design With 3D Beam Flattening. 2021 , 20, 4128-4143	51
830	Terahertz Massive MIMO With Holographic Reconfigurable Intelligent Surfaces. 2021 , 69, 4732-4750	38
829	Impact of IQ Imbalance on RIS-Assisted SISO Communication Systems. 2021 , 2021, 1-12	
828	RIS-Enhanced WPCNs: Joint Radio Resource Allocation and Passive Beamforming Optimization. 2021 , 70, 7980-7991	20
827	Covert Transmission Assisted by Intelligent Reflecting Surface. 2021 , 69, 5394-5408	16
826	Low-Complexity Random Rotation-Based Schemes for Intelligent Reflecting Surfaces. 2021 , 20, 5212-5225	6
825	Coverage Probability of Distributed IRS Systems Under Spatially Correlated Channels. 2021 , 10, 1722-1726	18
824	Multiple Intelligent Reflecting Surfaces for Capacity Maximization in LOS MIMO Systems. 2021 , 10, 1727-1731	3
823	A Review on Progress and Future Trends for Wireless Network for Communication System. 2022 , 445-453	1
822	RIS source decode-and-forward relaying network with interference. 2021 , 47, 101333	
821	Mixed RF/FSO Relay Networks: RIS-Equipped RF Source vs RIS-Aided RF Source. 2021 , 10, 1712-1716	6
820	Outage Probability Analysis of IRS-Assisted Systems Under Spatially Correlated Channels. 2021 , 10, 1815-1819	25
819	Intelligent reflecting surfaces with energy harvesting for Nakagami fading channels. 2021 , 78, 351	0
818	Performance of Ambient Backscatter Systems Using Reconfigurable Intelligent Surface. 2021 , 25, 2536-2539	8
817	Transparent dynamic metasurface for a visually unaffected reconfigurable intelligent surface: controlling transmission/reflection and making a window into an RF lens. 2021 , 29, 29292-29307	5

816	Non Orthogonal Multiple Access for Millimeter Wave Communications Using Intelligent Reflecting Surfaces. 1	
815	RFClock. 2021,	3
814	Resource Allocation for Intelligent Reflecting Surface Aided Wireless Powered Mobile Edge Computing in OFDM Systems. 2021, 20, 5389-5407	35
813	Uplink Achievable Rate Maximization for Reconfigurable Intelligent Surface Aided Millimeter Wave Systems With Resolution-Adaptive ADCs. 2021, 10, 1608-1612	3
812	Aerial intelligent reflecting surface-enhanced cell-free massive MIMO for high-mobility communication: joint Doppler compensation and power optimization. 2021, 2021,	0
811	Joint Beamforming and Reconfigurable Intelligent Surface Design for Two-Way Relay Networks. 2021, 69, 5620-5633	17
810	. 2021, 39, 2271-2288	9
809	Intelligent reflecting surface assisted MIMO communication system: A review. 2021, 47, 101386	8
808	Error Probability and Throughput Analysis of IRS-Assisted Wireless System Over Generalized (κ, μ) Fading Channels. 2021, 120, 1929-1944	3
807	Reconfigurable Intelligent Surface (RIS)-Assisted Wireless Systems: Potentials for 6G and a Case Study. 2022, 367-378	
806	Performance Analysis of Intelligent Reflecting Surface-Assisted Multi-Users Communication Networks. 2021, 10, 2084	1
805	Channel Estimation for RIS-Aided mmWave MIMO Systems via Atomic Norm Minimization. 2021, 20, 5786-5797	39
804	Reconfigurable Intelligent Surface Enhanced Secure Aerial-Ground Communication. 2021, 69, 6185-6197	6
803	Reconfigurable-Intelligent-Surface-Assisted MAC for Wireless Networks: Protocol Design, Analysis, and Optimization. 2021, 8, 14171-14186	13
802	Coverage Characterization of STAR-RIS Networks: NOMA and OMA. 2021, 25, 3036-3040	33
801	Intelligent Reflecting Surfaces Assisted UAV Communications for IoT Networks: Performance Analysis. 2021, 5, 1029-1040	16
800	Power Optimization for Aerial Intelligent Reflecting Surface-Aided Cell-Free Massive MIMO-Based Wireless Sensor Network. 2021, 2021, 1-10	1
799	Rate-Splitting Multiple Access for Intelligent Reflecting Surface Aided Multi-User Communications. 2021, 70, 9217-9229	15

798	Physical Layer Security of Non Orthogonal Multiple Access Using Reconfigurable Intelligent Surfaces. 1	1
797	Survey on reconfigurable intelligent surfaces below 10 GHz. 2021 , 2021,	5
796	Two-Timescale Beamforming Optimization for Intelligent Reflecting Surface Aided Multiuser Communication With QoS Constraints. 2021 , 20, 6179-6194	15
795	Performance Analysis and User Association Optimization for Wireless Network Aided by Multiple Intelligent Reflecting Surfaces. 2021 , 69, 6296-6312	11
794	Performance Analysis of Reconfigurable Intelligent Surface Assisted Wireless System With Low-Density Parity-Check Code. 2021 , 25, 2879-2883	3
793	Non Orthogonal Multiple Access with Energy Harvesting Using Reconfigurable Intelligent Surfaces for Rayleigh Channels. 1	0
792	Intelligent Reflective Surfaces for Wireless Networks: An Overview of Applications, Approached Issues, and Open Problems. 2021 , 10, 2345	8
791	Time-coding spread-spectrum reconfigurable intelligent surface for secure wireless communication: theory and experiment. 2021 , 29, 32031-32041	1
790	Intelligent Reflecting Surface Aided Multi-User Communication: Capacity Region and Deployment Strategy. 2021 , 69, 5790-5806	29
789	Reconfigurable Intelligent Surfaces-Assisted Multiuser MIMO Uplink Transmission With Partial CSI. 2021 , 20, 5613-5627	22
788	An Overview of Signal Processing Techniques for Terahertz Communications. 2021 , 109, 1628-1665	42
787	CURE: Enabling RF Energy Harvesting Using Cell-Free Massive MIMO UAVs Assisted by RIS. 2021 ,	3
786	RSS-Based Channel Estimation for IRS-Aided Wireless Energy Transfer System. 2021 , 8, 14860-14873	6
785	Joint design of transmit beamforming, IRS platform, and power splitting SWIPT receivers for downlink cellular multiuser MISO. 2021 , 48, 101413	3
784	Sum-Rate Maximization in IRS-Assisted Wireless Power Communication Networks. 2021 , 8, 14959-14970	10
783	Hybrid automatic repeat request-based intelligent reflecting surface-assisted communication system. 2021 , 57, 303-305	1
782	Sum-Rate Maximization for Multi-Reconfigurable Intelligent Surface-Assisted Device-to-Device Communications. 2021 , 1-1	6
781	Passive Communication with Ambient Noise. 2021 , 81, 814-833	

780	Beamforming Design Based on Two-Stage Stochastic Optimization for RIS-Assisted Over-the-Air Computation Systems. 2021 , 1-1		1
779	Hybrid Active/Passive Wireless Network Aided by Intelligent Reflecting Surface: System Modeling and Performance Analysis. 2021 , 1-1		15
778	Enhanced Coverage in the Shadow Region Using Dipole Scatterers at the Corner. 2021 , 1-1		1
777	Coverage Analysis of Reconfigurable Intelligent Surface Assisted THz Wireless Systems. 2021 , 2, 94-110		10
776	Joint Beam Training and Positioning for Intelligent Reflecting Surfaces Assisted Millimeter Wave Communications. 2021 , 1-1		26
775	Reconfigurable Intelligent Surface Optimal Placement in Millimeter-Wave Networks. 2021 , 2, 704-718		12
774	Robust Active and Passive Beamformer Design for IRS-aided Downlink MISO PS-SWIPT with a Nonlinear Energy Harvesting Model. 2021 , 1-1		9
773	Energy efficient fog computing for 6G enabled massive IoT: Recent trends and future opportunities. 2021 , 1-1		31
772	Novel ECC-Based RFID Mutual Authentication Protocol for Emerging IoT Applications. <i>IEEE Access</i> , 2021 , 9, 130895-130913	3-5	7
771	Two-Timescale Channel Estimation for Reconfigurable Intelligent Surface Aided Wireless Communications. 2021 , 1-1		59
770	Intelligent Reflecting Surface-Assisted Cognitive Radio System. 2021 , 69, 675-687		61
769	Robust Secure UAV Communications With the Aid of Reconfigurable Intelligent Surfaces. 2021 , 1-1		44
768	Performance Analysis of Intelligent Reflecting Surface-Assisted Wireless System With Non-Ideal Transceiver. 2021 , 2, 671-686		7
767	Channel Estimation for Reconfigurable Intelligent Surface Aided MISO Communications: From LMMSE to Deep Learning Solutions. 2021 , 2, 471-487		22
766	Resource Allocation for 5G-UAV Based Emergency Wireless Communications. 2021 , 1-1		14
765	Joint Power Allocation and Passive Beamforming Design for IRS-Assisted Physical-Layer Service Integration. 2021 , 1-1		3
764	Space Shift Keying With Reconfigurable Intelligent Surfaces: Phase Configuration Designs and Performance Analysis. 2021 , 2, 322-333		13
763	A Reconfigurable Intelligent Surface at mmWave Based on a Binary Phase Tunable Metasurface. 2021 , 2, 1055-1064		10

762	Wireless Power Transfer for Future Networks: Signal Processing, Machine Learning, Computing, and Sensing. 2021 , 1-1		20
761	Deep Learning Optimized Sparse Antenna Activation for Reconfigurable Intelligent Surface Assisted Communication. 2021 , 1-1		10
760	A Novel Physics-Based Channel Model for Reconfigurable Intelligent Surface-Assisted Multi-User Communication Systems. 2021 , 1-1		2
759	RISe of Flight: RIS-Empowered UAV Communications for Robust and Reliable Air-to-Ground Networks. 2021 , 2, 1616-1629		6
758	Intelligent Reflecting Surface Assisted Secret Key Generation. 2021 , 28, 1036-1040		10
757	Modeling and Architecture Design of Reconfigurable Intelligent Surfaces Using Scattering Parameter Network Analysis. 2021 , 1-1		9
756	Enhancing Indoor mmWave Wireless Coverage: Small-cell Densification or Reconfigurable Intelligent Surfaces Deployment?. 2021 , 1-1		3
755	Indoor and Outdoor Physical Channel Modeling and Efficient Positioning for Reconfigurable Intelligent Surfaces in mmWave Bands. 2021 , 1-1		19
754	On the Performance of IRS-Assisted Multi-Layer UAV Communications with Imperfect Phase Compensation. 2021 , 1-1		13
753	RIS-Aided Physical Layer Security With Full-Duplex Jamming in Underlay D2D Networks. <i>IEEE Access</i> , 2021 , 9, 99667-99679	3-5	11
752	Spatially-Distributed RISs vs Relay-Assisted Systems: A Fair Comparison. 2021 , 2, 799-817		9
751	On the Capacity of Reconfigurable Intelligent Surface Assisted MIMO Symbiotic Communications. 2021 , 1-1		0
750	Intelligent Reflecting Surface-assisted MU-MISO Systems with Imperfect Hardware: Channel Estimation and Beamforming Design. 2021 , 1-1		30
749	Reconfigurable Intelligent Surface for Massive Connectivity: Joint Activity Detection and Channel Estimation. 2021 , 1-1		2
748	A geometry-based stochastic channel model and its application for intelligent reflecting surface assisted wireless communication. 2021 , 15, 421-434		1
747	Secrecy outage probability analysis for RIS-assisted NOMA systems. 2020 , 56, 1254-1256		11
746	Recent advances and perspectives on space-time coding digital metasurfaces. 2020 , 7, 7		4
745	Complex Systems: A Communication Networks Perspective Towards 6G. <i>IEEE Access</i> , 2020 , 8, 89007-89030	30	23

744	Performance Analysis of Reconfigurable Intelligent Surface-Assisted Wireless Systems and Comparison With Relaying. <i>IEEE Access</i> , 2020 , 8, 94463-94483	3-5	70
743	Grant-Free Non-Orthogonal Multiple Access for IoT: A Survey. 2020 , 22, 1805-1838		81
742	Hybrid Beamforming for RIS-Empowered Multi-hop Terahertz Communications: A DRL-based Method. 2020 ,		11
741	Resource Allocation for Wireless Communications with Distributed Reconfigurable Intelligent Surfaces. 2020 ,		3
740	On the Ruin of Age of Information in Augmented Reality over Wireless Terahertz (THz) Networks. 2020 ,		6
739	IRS-Aided Wireless Communication with Imperfect CSI: Is Amplitude Control Helpful or Not?. 2020 ,		3
738	. 2020 , 58, 90-96		63
737	Intelligent Reflecting Surface-Assisted Multi-User MISO Communication: Channel Estimation and Beamforming Design. 2020 , 1, 661-680		128
736	Reconfigurable Intelligent Surfaces for Wireless Communications: Principles, Challenges, and Opportunities. 2020 , 6, 990-1002		172
735	The shift to 6G communications: vision and requirements. 2020 , 10,		42
734	Role of Wireless Communication in Healthcare System to Cater Disaster Situations Under 6G Vision. 2020 , 1,		10
733	Battery Recharging Time Models for Reconfigurable Intelligent Surfaces-Assisted Wireless Power Transfer Systems. 2021 , 1-1		5
732	UAV Swarm-Enabled Aerial Reconfigurable Intelligent Surface (SARIS). 2021 , 1-8		9
731	Statistical CSI-Based Transmission Design for Reconfigurable Intelligent Surface-aided Massive MIMO Systems with Hardware Impairments. 2021 , 1-1		4
730	. 2021 , 1-1		5
729	Extreme Communication in 6G: Vision and Challenges for In-XI Subnetworks. 2021 , 1-1		5
728	Deep Reinforcement Learning for Optimizing RIS-Assisted HD-FD Wireless Systems. 2021 , 1-1		2
727	Learning-based Prediction, Rendering and Transmission for Interactive Virtual Reality in RIS-Assisted Terahertz Networks. 2021 , 1-1		4

726	On the Performance of Multi-Antenna IRS-Assisted NOMA Networks with Continuous and Discrete IRS Phase Shifting. 2021 , 1-1		2
725	Outage Probability Expressions for an IRS-Assisted System With and Without Source-Destination Link for the Case of Quantized Phase Shifts in α -Fading. 2021 , 1-1		3
724	Intelligent Reflecting Surface for Spectral Efficiency Maximization in the Multi-User MISO Communication Systems. <i>IEEE Access</i> , 2021 , 9, 134695-134702	3-5	5
723	. 2021 , 1-1		20
722	. <i>IEEE Access</i> , 2021 , 9, 143198-143211	3-5	2
721	Performance Analysis of RIS-Aided Networks With Co-channel Interference. 2021 , 1-1		5
720	EMF-Aware Cellular Networks in RIS-Assisted Environments. 2021 , 1-1		4
719	Reconfigurable Intelligent Surface Optimization for Uplink Sparse Code Multiple Access. 2021 , 1-1		3
718	. 2021 , 1-1		47
717	Active Reconfigurable Intelligent Surface: Fully-Connected or Sub-Connected?. 2021 , 1-1		19
716	Channel Estimation for IRS-aided Multiuser Communications with Reduced Error Propagation. 2021 , 1-1		11
715	Multi-RIS-Aided Wireless Systems: Statistical Characterization and Performance Analysis. 2021 , 69, 8641-8658		12
714	Large Intelligent Surface-Based Generalized Index Modulation. 2021 , 1-1		3
713	Energy Efficient Multi-User Communications Aided by Reconfigurable Intelligent Surfaces and UAVs. 2021 ,		3
712	Secure Communication in a Multi-antenna Wiretap Channel with a Reconfigurable Intelligent Surface. 2021 ,		
711	Impact of Reconfigurable Intelligent Surface size on beamforming efficiency. 2021 ,		0
710	Nearly Passive Reconfigurable Intelligent Surface with Constant Phase-shifts. 2021 ,		
709	Where to Deploy Reconfigurable Intelligent Surfaces in the Presence of Blockages?. 2021 ,		1

708	Aerial Reconfigurable Intelligent Surface-Aided Wireless Communication Systems. 2021,	2
707	SimMBM Channel Simulator for Media-Based Modulation Systems. 2021,	
706	Secrecy Outage Probability of Reconfigurable Intelligent Surface-Aided Cooperative Underlay Cognitive Radio Network Communications. 2021,	1
705	Performance analysis of RIS-assisted SM with I/Q imbalance. 2021, 49, 101473	1
704	RFlens. 2021,	1
703	A reconfigurable intelligent surface with integrated sensing capability. 2021, 11, 20737	14
702	Performance Analysis of RIS-Assisted Mixed Dual-Hop FSO-RF Communication Systems over Exponentiated Weibull Channels. 2021, 2021, 1-7	
701	Performance Evaluation of Radio Frequency Interference Measurements from Microwave Links in Dense Urban Cities. 2021, 2, 328-368	3
700	Reconfigurable Intelligent Surface-Assisted Bluetooth Low Energy Link in Metal Enclosure. 2021, 2,	0
699	Positioning with Dual Reconfigurable Intelligent Surfaces in Millimeter-Wave MIMO Systems. 2020,	6
698	Toward 6G: From New Hardware Design to Wireless Semantic and Goal-Oriented Communication Paradigms. 2021,	2
697	Optimal harvesting and sensing durations for multi-antenna cognitive radio networks using intelligent reflecting surfaces. 1	1
696	Physical Layer Security of RIS-assisted NOMA Networks Over Fisher-Snedecor F Composite Fading Channel. 2021,	
695	Present and Future of Reconfigurable Intelligent Surface-Empowered Communications [Perspectives]. 2021, 38, 146-152	12
694	Reconfigurable Intelligent Surface Assisted D2D Networks: Power and Discrete Phase Shift Design. 2020,	1
693	. 2020,	4
692	Achievable Rate Maximization for Aerial Intelligent Reflecting Surface-aided Cell-free Massive MIMO System. 2020,	0
691	RIS-Assisted MISO Communication: Optimal Beamformers and Performance Analysis. 2020,	2

690	A Stackelberg Game Approach to Resource Allocation for IRS-aided Communications. 2020,	3
689	A Novel Channel Model for Reconfigurable Intelligent Surface-assisted Wireless Networks. 2020,	0
688	Joint Base Station-IRS-User Association in Multi-IRS-Aided Wireless Network. 2020,	3
687	Codebook-based Phase Adjustment for IRS-aided Communication Via Time-Coding Modulation. 2020,	1
686	Outage Constrained Transmission Design for IRS-aided Communications with Imperfect Cascaded Channels. 2020,	4
685	Joint Trajectory and Passive Beamforming Design for Secure UAV Networks with RIS. 2020,	13
684	Capacity Enhancement for Irregular Reconfigurable Intelligent Surface-Aided Wireless Communications. 2020,	2
683	Outage Analysis for Intelligent Reflecting Surface Assisted Vehicular Communication Networks. 2020,	11
682	Reconfigurable Intelligent Surface Enhanced Device-to-Device Communications. 2020,	6
681	Reconfigurable Intelligent Surface Aided Constant-Envelope Wireless Power Transfer. 2020,	
680	Resource Allocation for Intelligent Reflecting Surface Aided Cooperative Communications. 2020,	1
679	Joint Passive Beamforming and Information Transfer for RIS-Empowered Wireless Communications. 2020,	2
678	Energy Efficiency Analysis of Intelligent Reflecting Surface System with Hardware Impairments. 2020,	7
677	. 2021, 1-1	3
676	Compact User-Specific Reconfigurable Intelligent Surfaces for Uplink Transmission. 2021, 1-1	8
675	6G Wireless Communications Networks: A Comprehensive Survey. <i>IEEE Access</i> , 2021, 1-1	3-5 27
674	Reconfigurable Intelligent Surface-Aided Wireless Communications: Adaptive Beamforming and Experimental Validations. <i>IEEE Access</i> , 2021, 1-1	3-5 3
673	Reconfigurable Intelligent Surface Enabled Full-Duplex/Half-Duplex Cooperative Non-Orthogonal Multiple Access. 2021, 1-1	8

672	Performance Evaluation of RIS-Assisted UAV-Enabled Vehicular Communication System With Multiple Non-Identical Interferers. 2021 , 1-12	7
671	Intelligent Reflecting Surface-Aided Space-Time Line Coded Systems. 2021 , 1-1	3
670	Research progress of information metamaterials. 2020 , 69, 158101	4
669	Massive Connectivity in 5G and Beyond: Technical Enablers for the Energy and Automotive Verticals. 2020 ,	6
668	Intelligent Reflecting Surface-Assisted Full-Duplex UAV-Based Mobile Relay Communication. 2021 , 212-223	
667	Frequency Scanning Reflectarray Based on Composite Right/Left-Handed Transmission Lines. 2021 ,	
666	Outage Probability of Reconfigurable Intelligent Surface Aided THz Communications. 2021 ,	
665	Robust Beamforming for Reconfigurable Intelligent Surface Aided Coordinated Multipoint Transmission. 2021 ,	
664	The Impact of Interference Reflection on Reconfigurable Intelligent Surface-Aided Directional Transmissions. 2021 ,	1
663	Direct Antenna Modulator for m-QAM Applications. 2020 ,	1
662	ZF-Beamforming MIMO Systems Using Intelligent Reflecting Surface. 2021 ,	
661	Towards 6G and Beyond. 2021 ,	0
660	The Art of 6G (TAO 6G): How To Wire Society 50.	1
659	Catching the 6G Wave by Using Metamaterials. 2021 , 69-87	
658	Greening 6G. 2021 , 39-53	1
657	An optimized scheme for energy efficient wireless communication via intelligent reflecting surfaces. 2021 , 190, 116106	4
656	Simple Dipole Scatter for Filling a Shadow Region. 2020 ,	1
655	Physical Layer Security in RIS-assisted Networks in Fisher-Snedecor Composite Fading. 2020 ,	5

654	Feature-oriented channel estimation in reconfigurable intelligent surface-assisted wireless communication systems. 2020 , 14, 3458-3463	1
653	Blocking Probability in Obstructed Tunnels with Reconfigurable Intelligent Surface. 2021 , 1-1	3
652	A Robust Deep Learning-Based Beamforming Design for RIS-assisted Multiuser MISO Communications with Practical Constraints. 2021 , 1-1	4
651	. 2021 , 1-1	1
650	Holographic Smart EM Skins for Advanced Beam Power Shaping in Next Generation Wireless Environments. 2021 , 6, 171-182	10
649	Optimal Power Allocation in STAR-RIS for CoMP Transmission. 2021 ,	1
648	Intelligent Reflecting Surface assisted millimeter wave communication for achievable rate and coverage enhancement. 2022 , 33, 100431	1
647	Machine Learning-based Reconfigurable Intelligent Surface-aided MIMO Systems. 2021 ,	5
646	RIS-Enabled Localization Continuity Under Near-Field Conditions. 2021 ,	7
645	WiThRay: Versatile 3D Simulator for Intelligent Reflecting Surface-aided MmWave Systems. 2021 ,	
644	Performance Analysis of Intelligent Reflecting Surface Selection for Orthogonal and Non-Orthogonal Multiple Access. 2021 ,	
643	Joint Transceiver and Passive Beamforming Optimization for RIS-Assisted MIMO Systems. 2021 ,	
642	Using Reflective Intelligent Surfaces for Indoor Scenarios: Channel Modeling and RIS Placement. 2021 ,	0
641	Joint Channel Estimation and Data Detection for Intelligent Transparent Surface (ITS) Aided Wireless Communications on Railways. 2021 ,	0
640	. 2021 , 59, 57-63	13
639	Intelligent reflecting surface-assisted downlink nonorthogonal multiple access systems. 2022 , 35, e5035	
638	Reconfigurable intelligent surface: Design the channel A new opportunity for future wireless networks. 2021 ,	7
637	Coverage analysis of intelligent reflecting surface systems in Rayleigh fading.	

636	Reconfigurable Intelligent Surface-assisted Multi-UAV Networks: Efficient Resource Allocation with Deep Reinforcement Learning. 2021 , 1-1	9
635	An Angle-Insensitive 3-Bit Reconfigurable Intelligent Surface. 2021 , 1-1	9
634	Effects of Hardware Impairments on IRS-enabled MISO Wireless Communication Systems. 2021 , 1-1	1
633	A Non-Stationary 3-D Wideband Channel Model for Intelligent Reflecting Surface-Assisted HAP-MIMO Communication Systems. 2021 , 1-1	2
632	LSTM based Energy-Efficient Wireless Communication with Reconfigurable Intelligent Surfaces. 2021 , 1-1	1
631	Robust Optimization of Instantaneous Beamforming and Quasi-static Phase Shifts in an IRS-assisted Multi-Cell Network. 2021 , 1-1	1
630	Ergodic Capacity of IRS-Assisted MIMO Systems with Correlation and Practical Phase-Shift Modeling. 2021 , 1-1	3
629	Metasurface-Coated Devices: A New Paradigm for Energy-Efficient and Secure 6G Communications. 2021 , 2-11	2
628	Doppler Mitigation Method Aided by Reconfigurable Intelligent Surfaces for High-Speed Channels. 2021 , 1-1	5
627	Joint Resource Allocation and Phase Shift Optimization for RIS-Aided eMBB/URLLC Traffic Multiplexing. 2021 , 1-1	6
626	A Novel NOMA Solution with RIS Partitioning. 2021 , 1-1	5
625	. 2021 , 1-1	7
624	Joint Active and Passive Beamforming for IRS-Assisted Radar. 2021 , 1-1	4
623	IRS-Enabled Beam-Space Channel. 2021 , 1-1	1
622	Multi-Task Learning-Based Channel Estimation for RIS Assisted Multi-User Communication Systems. 2021 , 1-1	1
621	Unified Performance Analysis of Reconfigurable Intelligent Surface Empowered Free-Space Optical Communications. 2021 , 1-1	4
620	Low-Complexity Channel Estimation and Passive Beamforming for RIS-Assisted MIMO Systems Relying on Discrete Phase Shifts. 2021 , 1-1	8
619	Throughput enhancement for millimeter wave communications using reconfigurable intelligent surfaces. 1	

618	Sum-Rate Maximization for Intelligent Reflecting Surface Assisted Terahertz Communications. 2022 , 1-1	7
617	Throughput maximization of an IRS-assisted wireless powered network with interference: A deep unsupervised learning approach. 2022 , 51, 101558	2
616	Smart EM Environment as Enabling Technology for Future Wireless Systems. 2020 ,	1
615	Distributed Computational Imaging with Reconfigurable Intelligent Surface. 2020 ,	1
614	Realization of Reconfigurable Intelligent Surface-Based Alamouti Space-Time Transmission. 2020 ,	4
613	Multi-Intelligent Reflecting Surface-Aided Wireless Network With Achievable Rate Maximization. 2020 ,	
612	Secure Transmission in IRS-Assisted MIMO Systems with Active Eavesdroppers. 2020 ,	6
611	Generalized Polarization-Space Modulation in Reconfigurable Intelligent Surfaces. 2020 ,	2
610	Multigroup Multicast Transmission via Intelligent Reflecting Surface. 2020 ,	1
609	A Millimeter-Wave Reconfigurable Intelligent Metasurface Design for Vehicular Networks Applications. 2020 ,	1
608	Evaluation of Intelligent Reflecting Surfaces for Diffuse Visible Light Communications Link. 2020 ,	0
607	3-D Pattern Modulation Surfaces Using Short-Circuited Slotline Structure: Proposal, Design, and Implementation. 2021 , 1-1	0
606	Fluid Antenna Multiple Access. 2021 , 1-1	5
605	RIS-Assisted Code-Domain MIMO-NOMA. 2021 ,	1
604	A Comprehensive Review on Physical Layer Design for Smart Cities. 2022 , 1-19	
603	A Model and Data Hybrid Driven Detection Scheme for IRS-Assisted Massive MIMO Systems. 2021 ,	
602	Distributed RIS-based Dual-hop Mixed FSO-RF Systems With RIS-Aided Jammer. 2021 ,	2
601	Reconfigurable Intelligent Surface Assisted Spreading and CDMA Wireless Communications. 2021 ,	

600	Reconfigurable Intelligent Surface for 5G NR Uplink Coverage Enhancement. 2021,	0
599	Planning Mm-Wave Access Networks With Reconfigurable Intelligent Surfaces. 2021,	1
598	Performance of Large Intelligent Surface-enabled Cooperative Networks Over Nakagami-m Channels. 2021,	1
597	Power Minimization Transmission Design for IRS-Assisted Uplink NOMA Systems. 2021,	0
596	End-to-End Deep Learning IRS-assisted Communications Systems. 2021,	1
595	Intelligent Reflecting Surfaces Versus Full-Duplex Relaying: Performance Comparison for Non-Ideal Transmitter Case. 2021,	
594	Intelligent Reflecting Surface-Assisted Wireless Key Generation for Low-Entropy Environments. 2021,	1
593	Outage Probability Analysis of RIS-assisted Wireless Powered Multi-user Communications. 2021,	0
592	Channel Estimation for IRS-Assisted Multi-User Millimeter Wave MIMO Systems. 2021,	
591	Wide Incident Angle Digital Coding Metasurface Applied to Reconfigurable Intelligent Surfaces. 2021,	0
590	A Study on Machine Learning-based Approaches for Reconfigurable Intelligent Surface. 2021,	1
589	Fast Beam Search for IRS-Assisted Cellular Systems. 2021,	
588	Multi-Intelligent Reflecting Surface Assisted Cell-free Massive MIMO Downlink Transmission. 2021,	0
587	Dynamic Control of Electromagnetic Waves by 2-Bit Programmable Metasurface in Dual-Band. 2021	1
586	Error Propagation Reduced Channel Estimation for IRS-aided Multiuser Communications. 2021,	2
585	Two-Way Cognitive Network supported by Reconfigurable Intelligent Surface. 2021,	
584	Ergodic Capacity and Outage Probability Analysis of Intelligent Reflecting Surface Aided Communication Systems. 2021,	1
583	Energy Efficiency Maximization in RIS-assisted Wireless Networks. 2021,	

582	Adding Active Elements to Reconfigurable Intelligent Surfaces to Enhance Energy Harvesting for IoT Devices. 2021 ,		0
581	Joint Beamforming Design for LOS MIMO Systems with Multiple Intelligent Reflecting Surfaces. 2021 ,		
580	Optimization of Reconfigurable Intelligent Surface for M2M Communications over Cellular Networks. 2021 ,		0
579	Learning-based Strategy for RIS-Assisted Terahertz Virtual Reality Networks. 2021 ,		
578	Static Reflecting Surface Based on Population-level Optimization. 2021 ,		
577	RIS-assisted Aerial Backhaul System for UAV-BSs: An Energy-efficiency Perspective. 2021 ,		1
576	Reconfigurable Intelligent Surface-Assisted HAPS Relaying Communication Networks for Multiusers Under AF Protocol: A Performance Analysis. <i>IEEE Access</i> , 2022 , 10, 14857-14869	3.5	1
575	Reconfigurable Intelligent Surface Aided Cellular Networks with Device-to-Device Users. 2022 , 1-1		4
574	Reconfigurable Intelligent Surface Assisted Multi-Carrier Wireless Systems for Doubly Selective High-Mobility Ricean Channels. 2022 , 1-1		3
573	Seven Defining Features of Terahertz (THz) Wireless Systems: A Fellowship of Communication and Sensing. 2022 , 1-1		27
572	Learning to Estimate RIS-Aided mmWave Channels. 2022 , 1-1		1
571	A 3D Non-Stationary MIMO Channel Model for Reconfigurable Intelligent Surface Auxiliary UAV-to-Ground mmWave Communications. 2022 , 1-1		6
570	Reconfigurable Intelligent Surfaces with Outdated Channel State Information: Centralized vs. Distributed Deployments. 2022 , 1-1		4
569	Analysis of Multipath Fading and Doppler Effect with Multiple Reconfigurable Intelligent Surfaces in Mobile Wireless Networks. 2022 , 2022, 1-15		2
568	Reconfigurable Intelligent Surface (RIS) in the Sub-6 GHz Band: Design, Implementation, and Real-World Demonstration. <i>IEEE Access</i> , 2022 , 10, 2646-2655	3.5	9
567	. 2022 , 3, 135-153		1
566	Analysis of Asymmetry in Active Split-Ring Resonators to Design Circulating-Current Eigenmode: Demonstration of Beamsteering and Focal-Length Control toward Reconfigurable Intelligent Surface.. 2022 , 22,		
565	An Innovative Infrastructure Based on Shape-Adaptive RIS for Smart Industrial IoTs. 2022 , 11, 391		0

564	Beamforming Design for IRS-aided Decode-and-Forward Relay Wireless Network. 2022 , 1-1		3
563	On the Design of Modular Reflecting EM Skins for Enhanced Urban Wireless Coverage. 2022 , 1-1		3
562	Deployment Optimization of Reconfigurable Intelligent Surface for Relay Systems. 2022 , 1-1		0
561	Foundations of Wireless Information and Power Transfer: Theory, Prototypes, and Experiments. 2022 , 110, 8-30		6
560	Optically Transparent and Flexible Radio Frequency Electronics through Printing Technologies. 2101277		0
559	Joint Training of the Superimposed Direct and Reflected Links in Reconfigurable Intelligent Surface Assisted Multiuser Communications. 2022 , 1-1		2
558	Performance of Cooperative Communication System With Multiple Reconfigurable Intelligent Surfaces Over Nakagami-m Fading Channels. <i>IEEE Access</i> , 2022 , 10, 9806-9816	3-5	2
557	Reconfigurable Intelligent Surface-Assisted Spatial Scattering Modulation. 2022 , 26, 192-196		1
556	Intelligent Reflecting Surface-Aided Wireless Energy and Information Transmission: An Overview. 2022 , 110, 150-170		19
555	Stochastic Geometry Analysis of IRS-Assisted Downlink Cellular Networks. 2022 , 1-1		4
554	Joint Design of Hybrid Beamforming and Reflection Coefficients in RIS-aided mmWave MIMO Systems. 2022 , 1-1		3
553	Self-Sustainable Reconfigurable Intelligent Surface Aided Simultaneous Terahertz Information and Power Transfer (STIPT). 2022 , 1-1		4
552	Intelligent Reflecting Surface-Aided URLLC in a Factory Automation Scenario. 2022 , 70, 707-723		16
551	Capacity Improvement for Intelligent Reflecting Surface-Assisted Wireless Systems With a Limited Number of Passive Elements. 2022 , 1-1		1
550	Robust Secure Beamforming Algorithm for Intelligent Reflecting Surface-Assisted Satellite-Terrestrial Integrated Networks. 2022 ,		
549	Performance Analysis of an Index Modulation-Based Receive Diversity RIS-Assisted Wireless Communication System. 2022 , 1-1		0
548	Secure reconfigurable intelligent surface aided heterogeneous VLCRF cooperative NOMA networks. 2022 , 511, 127983		2
547	Metasurface Near-Field Measurements with Incident Field Reconstruction Using a Single Horn Antenna. 2022 , 25, 69-75		

546	On Energy Efficiency of Wideband RIS-Aided Cell-Free Network. <i>IEEE Access</i> , 2022 , 1-1	3-5	2
545	Outage Analysis of NOMA-Enabled Backscatter Communications with Intelligent Reflecting Surfaces. 2022 , 1-1		1
544	On the Study of Reconfigurable Intelligent Surfaces in the Near-Field Region. 2022 , 1-1		1
543	Parasitic Antennas for Current and Future Wireless Communication Systems: Trends, Challenges, and Emerging Aspects. 2022 , 43-54		
542	Compressive Near-Field Localization For Multipath RIS-aided Environments. 2022 , 1-1		3
541	UAV-Assisted RIS for Future Wireless Communications: A Survey on Optimization and Performance Analysis. <i>IEEE Access</i> , 2022 , 1-1	3-5	5
540	Optimization of Quantized Phase Shifts for Reconfigurable Smart Surfaces Assisted Communications. 2022 ,		1
539	Practical Channel Estimation and Phase Shift Design for Intelligent Reflecting Surface Empowered MIMO Systems. 2022 , 1-1		4
538	Performance Analysis of UAV-based IRS Assisted Hybrid RF/FSO Link with Pointing and Phase Shift Errors.		1
537	Terahertz Reconfigurable Intelligent Surfaces (RISs) for 6G Communication Links.. 2022 , 13,		4
536	Federated Learning for 6G: Applications, Challenges, and Opportunities. 2022 , 8, 33-41		21
535	Statistical QoS Analysis of Reconfigurable Intelligent Surface-assisted D2D Communication. 2022 , 1-1		3
534	Modulating Intelligent Surfaces for Multi-User MIMO Systems: Beamforming and Modulation Design. 2022 , 1-1		0
533	Hybrid Relay-Reflecting Intelligent Surface-Assisted Wireless Communications. 2022 , 1-1		8
532	Performance and Optimization of Reconfigurable Intelligent Surface Aided THz Communications. 2022 , 1-1		8
531	Performance Evaluation and Diversity Analysis of RIS-Assisted Communications Over Generalized Fading Channels in the Presence of Phase Noise. 2022 , 1-1		4
530	Energy-Efficient Resource Allocation and Antenna Selection for IRS-assisted Multi-Cell Downlink Networks. 2022 , 1-1		1
529	Reconfigurable Intelligent Surfaces Relying on Non-Diagonal Phase Shift Matrices. 2022 , 1-1		5

528	A Multi-Routes Cascaded IRSs Beamforming Scheme in mmWave Communication Systems. 2022 , 1-1	
527	Control of Electromagnetic Radiation on Coexisting Smart Radio Environment. 2022 , 3, 557-573	0
526	Finite Block Length Analysis of RIS-Assisted UAV-Based Multiuser IoT Communication System with Non-Linear EH. 2022 , 1-1	6
525	Deep Reinforcement Learning Powered IRS-Assisted Downlink NOMA. 2022 , 1-1	7
524	Building a Smart EM Environment -AI-Enhanced Aperiodic Micro-Scale Design of Passive EM Skins. 2022 , 1-1	4
523	Planar Pattern Manipulation Surfaces Using Dual-Polarized Pin-Loaded Patch Resonating Elements. 2022 , 1-1	0
522	Modeling and Design of IRS-Assisted Multi-Link FSO Systems. 2022 , 1-1	0
521	Intelligent Reflecting Surface Aided Wireless Networks: Dynamic User Access and System Sum-Rate Maximization. 2022 , 1-1	0
520	Joint Beamforming for IRS-Aided Multi-Cell MISO System: Sum Rate Maximization and SINR Balancing. 2022 , 1-1	
519	RIS-Assisted Communication Radar Coexistence: Joint Beamforming Design and Analysis. 2022 , 1-1	7
518	Signal Space Diversity-Based Distributed RIS-Aided Dual-Hop Mixed RF-FSO Systems. 2022 , 1-1	1
517	Resource Allocation in STAR-RIS-Aided Networks: OMA and NOMA. 2022 , 1-1	11
516	Reradiation and Scattering from a Reconfigurable Intelligent Surface: A General Macroscopic Model. 2022 , 1-1	4
515	Machine Learning Approaches for Reconfigurable Intelligent Surfaces: A Survey. <i>IEEE Access</i> , 2022 , 10, 27343-27367	3-5 3
514	Design and Evaluation of Reconfigurable Intelligent Surfaces in Real-World Environment. 2022 , 3, 462-474	7
513	On the Distribution of the Sum of Double-Nakagami-m Random Vectors and Application in Randomly Reconfigurable Surfaces. 2022 , 1-1	6
512	Optimal Placement of Reconfigurable Intelligent Surfaces for Spectrum Coexistence With Radars. 2022 , 1-1	2
511	Conclusions and future directions. 2022 , 201-213	

510	Target Sensing with Intelligent Reflecting Surface: Architecture and Performance. 2022 , 1-1	6
509	Analysis of Multi-Path Fading and the Doppler Effect for Reconfigurable-Intelligent-Surface-Assisted Wireless Networks.. 2022 , 24,	1
508	A Novel Wireless Resource Management for the 6G-Enabled High-Density Internet of Things. 2022 , 29, 32-39	0
507	Vision, application scenarios, and key technology trends for 6G mobile communications. 2022 , 65, 1	6
506	Multidimensional Heterogeneous Network Link Adaptation Based on Mobile Environment.. 2022 , 2022, 9450393	
505	VO-based ultra-reconfigurable intelligent reflective surface for 5G applications.. 2022 , 12, 4497	6
504	Bruce Lee-Inspired Fluid Antenna System: Six Research Topics and the Potentials for 6G. 2022 , 3,	3
503	Intelligent Reflecting Surface Aided Wireless Systems with Imperfect Hardware. 2022 , 11, 900	1
502	Digital Art Pattern Design Based on Visual Material Colouring Intelligent Programming System. 2022 , 2022, 1-10	
501	Resource Allocation Using Reconfigurable Intelligent Surface (RIS)-Assisted Wireless Networks in Industry 5.0 Scenario. 2022 , 3, 163-173	1
500	Two-Stage Multiarmed Bandit for Reconfigurable Intelligent Surface Aided Millimeter Wave Communications.. 2022 , 22,	4
499	High mobility transmission system under intelligent reflecting surface.	1
498	Multi-constraint two-way underlay cognitive network using reconfigurable intelligent surface. 1	0
497	Joint beamforming and power allocation for intelligent reflecting surface-aided millimeter wave MIMO systems. 1	
496	Nonorthogonal multiple access with adaptive transmit power and energy harvesting using intelligent reflecting surfaces for cognitive radio networks. 1	1
495	Phase-shifted circularly polarised ring microstrip antenna and application in phased array antennas.	
494	Physicists in a World of Wireless Communications: A Noisy Connection? [Industry Activities]. 2022 , 64, 89-94	
493	A Review on 6G Wireless Communication Systems: Localization and Sensing. 2021 ,	1

492	RIS Enabled Secure Communication with Covert Constraint. 2021,	1
491	Cramér-Rao Bounds for Near-Field Localization. 2021,	0
490	Physical Channel Modeling for RIS-Empowered Wireless Networks in Sub-6 GHz Bands : (Invited Paper). 2021,	1
489	Two Differential Schemes For Reflecting Modulation Aided Spatial Modulation System. 2021,	
488	On the Performance of Physical Layer Security of RIS-aided Communications. 2021,	0
487	Reconfigurable Intelligent Surface Empowered Differential Chaos Shift Keying Assisted Media-Based Modulation over Nakagami-m Fading Channels. 2021,	
486	Performance Analysis of IRS-Aided NOMA Communications in the Presence of Imperfect SIC. 2021, 21, 341-350	1
485	Secrecy Performance Analysis of RIS-Enabled Wireless Networks Over Rayleigh Fading Channels. 2021,	0
484	Reflecting Metasurface Unit Cell Design with Multi-Bit Azimuthal Control. 2021,	1
483	Level Crossing Rate and Average Fade Duration of RIS-Assisted RF Communication System. 2021,	1
482	Secure Performance Analysis of RIS-aided Wireless Communication Systems. 2021,	1
481	A Simple Physical-Layer Key Generation for Frequency-Division Duplexing (FDD). 2021,	0
480	Reconfigurable intelligent surface aided coordinated multipoint transmission for the simultaneous wireless information and power transfer non-orthogonal multiple access network.	0
479	Antennas/PINs Selection and Joint Beamforming for High Rank LOS MmWave Communications. 2021,	
478	Space-Time-Frequency Modulation Mechanisms of Monochromatic and Nonmonochromatic Electromagnetic Waves on a Digital Programmable Transmission Metasurface. 2022, 32, 2107557	2
477	Enabling Smart Reflection in Integrated Air-Ground Wireless Network: IRS Meets UAV. 2021, 28, 138-144	22
476	Reconfigurable Intelligent Surfaces for 5G and beyond Wireless Communications: A Comprehensive Survey. 2021, 14, 8219	6
475	Link Performance of Multiple Reconfigurable Intelligent Surfaces and Direct Path in General Fading. 2021,	0

474	Secrecy Performance of RIS-assisted Wireless Networks under Rician fading. 2021,	
473	A Reconfigurable Intelligent Surface Using a 2-Bit Programmable Metasurface for Communications. 2021,	0
472	Autoencoder-based Communications with Reconfigurable Intelligent Surfaces. 2021,	0
471	User-Side RIS: Realizing Large-Scale Array at User Side. 2021,	1
470	Hybrid Beamforming for Distributed Intelligent Reflecting Surfaces-Aided Systems. 2021,	0
469	Analysis of symbol error rate for intelligent reflecting surface aided communications. 2022, 16, 84-90	0
468	Secret Key Group Implementation Using Chain Topology. 2021,	
467	Optimization for IRS-Assisted Systems With Both Multicast and Confidential Messages. 2021,	1
466	Shaping mmWave Wireless Channel via Multi-Beam Design using Reconfigurable Intelligent Surfaces. 2021,	2
465	Implementation of Resonant Electric Based Metamaterials for Electromagnetic Wave Manipulation at Microwave Frequencies.. 2021, 21,	0
464	Wave Manipulation through Advanced Smart Skins for Shaped Beam Synthesis. 2021,	
463	Optimal, Low-Complexity Beamforming for Discrete Phase Reconfigurable Intelligent Surfaces. 2021,	
462	RIS-Aided Next-Generation High-Speed Train Communications: Challenges, Solutions, and Future Directions. 2021, 28, 145-151	7
461	Multimodal Wireless Situational Awareness-Based Tourism Service Scene. 2021, 2021, 1-9	0
460	SimRIS Channel Simulator for Reconfigurable Intelligent Surface-Empowered Communication Systems. 2020,	9
459	IRS-assisted Multi-cell Multi-band Systems: Practical Reflection Model and Joint Beamforming Design. 2022, 1-1	2
458	6G With Smart Healthcare, Haptic Communication. 2022, 303-329	
457	Joint Beamforming Design for Multiuser MISO Downlink Aided by a Reconfigurable Intelligent Surface and a Relay. 2022, 1-1	2

456	A New RIS Architecture with a Single Power Amplifier: Energy Efficiency and Error Performance Analysis. <i>IEEE Access</i> , 2022 , 1-1	3-5	5
455	Evaluation of Sixth Generation 6G Wireless Networks. 2022 , 1-26		
454	Performance analysis of intelligent reflecting surface aided full-duplex amplify-and-forward relay networks.		
453	On the secrecy performance of RIS-enabled wireless communications over Nakagami-m fading channels. 2022 ,		0
452	Dynamic wireless networks assisted by RIS mounted on aerial platform: Joint active and passive beamforming design.		
451	Design and Application of Intelligent Reflecting Surface (IRS) for Beyond 5G Wireless Networks: A Review.. 2022 , 22,		3
450	On the Achievable Capacity of Cooperative NOMA Networks: RIS or Relay?. 2022 , 1-1		2
449	Generalized Superimposed Training Scheme In IRS-assisted Cell-free Massive MIMO Systems. 2022 , 1-1		1
448	RIS-Aided Multiple User Interference Mitigation via Fast Successive Upper-bound Minimization Method. 2022 , 1-1		
447	Securing Intelligent Reflecting Surface Assisted Terahertz Systems. 2022 , 1-1		2
446	Reconfigurable Intelligent Surfaces: Simplified-Architecture Transmitters--From Theory to Implementations. 2022 , 1-24		7
445	Joint Transmit Waveform and Passive Beamforming Design for RIS-Aided DFRC Systems. 2022 , 1-1		11
444	On the Performance of IRS-Aided UAV Networks with NOMA. 2022 , 1-1		2
443	Outage Performance of Cognitive Radio Networks with a Coverage-Limited RIS for Interference Elimination. 2022 , 1-1		1
442	Visible Light and Reconfigurable Intelligent Surfaces for Beyond 5G V2X Communication Networks at Road Intersections. 2022 , 1-1		1
441	Cooperative Reflection and Synchronization Design for Distributed Multiple-RIS Communications. 2022 , 1-1		2
440	Channel Estimation With Reconfigurable Intelligent Surfaces--A General Framework. 2022 , 1-27		13
439	What Will the Future of UAV Cellular Communications Be? A Flight from 5G to 6G. 2022 , 1-1		9

438	RIS-assisted UAV Communications for IoT with Wireless Power Transfer Using Deep Reinforcement Learning. 2022 , 1-1		6
437	Enhancing UAV-Based Public Safety Networks with Reconfigurable Intelligent Surfaces. 2022 , 145-167		1
436	MIMO Evolution Beyond 5G Through Reconfigurable Intelligent Surfaces and Fluid Antenna Systems. 2022 , 1-22		4
435	Cognitive Radio Networks Using Intelligent Reflecting Surfaces. 2022 , 43, 751-765		
434	IRS-Assisted Physical Layer Network Coding over Two-Way Relay Fading Channels. 2022 , 1-1		0
433	RIS-Focus: On the Optimal Placement of the Focal Plane for Outdoor Beam Routing. <i>IEEE Access</i> , 2022 , 1-1	3.5	1
432	Sum-Rate Optimization for IRS-Aided D2D Communication Underlying Cellular Networks. <i>IEEE Access</i> , 2022 , 10, 48499-48509	3.5	0
431	Intelligent Attack Analysis for IRS Communications with Incomplete Information. 2022 , 202, 269-276		1
430	Intelligent Reflecting Surface-Aided Wireless Networks: From Single-Reflection to Multireflection Design and Optimization. 2022 , 1-21		9
429	Throughput Analysis of RIS-Aided Wireless System over Fisher-Snedecor Composite channel. 2022 ,		0
428	Smart Reconfigurable Intelligent Surface with Discrete Phase Shifter for Next Generation Networks. 2022 ,		
427	A Deep Learning Scheme for Integrated Active and Passive Beamforming in Reconfigurable Intelligent Surface Aided Wireless MISO Networks. 2022 ,		
426	Reconfigurable intelligent surface based hybrid precoding for THz communications. 2022 , 3, 103-118		2
425	Maximizing dirty-paper coding rate of RIS-assisted multi-user MIMO broadcast channels. 2022 , 3, 64-73		0
424	User cooperation for IRS-aided secure MIMO systems. 2022 , 3, 86-102		0
423	Performance analysis of reconfigurable intelligent surface assisted systems under channel aging. 2022 , 3, 74-85		2
422	Reconfigurable intelligent surfaces for wireless communications: Overview of hardware designs, channel models, and estimation techniques. 2022 , 3, 1-32		17
421	Enabling URLLC Applications Through Reconfigurable Intelligent Surfaces: Challenges and Potential. 2022 , 5, 130-135		0

420	NOMA using intelligent reflecting surfaces with adaptive transmit power and multi-antennas energy harvesting. 1	
419	A survey on IRS NOMA integrated communication networks. 2022 , 80, 277	0
418	Optimal Power Allocation and Cooperative Relaying under Fuzzy Inference System (FIS) Based Downlink PD-NOMA. 2022 , 11, 1338	0
417	Intelligent metasurfaces: control, communication and computing. 2022 , 2,	22
416	Reconfigurable intelligent surface assisted downlink INOMA system.	
415	RIS-Aided Monostatic MIMO Radar with Co-Located Antennas. 2022 ,	
414	User Scheduling Using Graph Neural Networks for Reconfigurable Intelligent Surface Assisted Multiuser Downlink Communications. 2022 ,	1
413	A Performance Analysis for Multi-RIS-Assisted Full Duplex Wireless Communication System. 2022 ,	0
412	Coverage probability of RIS-assisted mmWave cellular networks under blockages: A stochastic geometric approach. 2022 , 53, 101740	
411	On the ADEP and DOR Analysis of RIS-aided URLLC Systems with Partial CSI in Smart Factory. 2021 ,	
410	Intelligent Beyond 5G Systems: Upcoming Wireless Communication Systems. 2022 , 759-764	
409	An Energy-efficient Aerial Backhaul System with Reconfigurable Intelligent Surface. 2022 , 1-1	5
408	RIS-Enabled SISO Localization under User Mobility and Spatial-Wideband Effects. 2022 , 1-1	1
407	STAR-RISs: A Correlated T&R Phase-Shift Model and Practical Phase-Shift Configuration Strategies. 2022 , 1-1	5
406	Distributed and Scalable Uplink Processing for LIS: Algorithm, Architecture, and Design Trade-offs. 2022 , 1-1	1
405	Distributed Machine Learning Based Downlink Channel Estimation for RIS Assisted Wireless Communications. 2022 , 1-1	0
404	A 3D Wideband Channel Model for RIS-Assisted MIMO Communications. 2022 , 1-1	1
403	Long-Lasting UAV-aided RIS Communications based on SWIPT. 2022 ,	2

402	Performance Analysis for the Coupled Phase-Shift STAR-RISs. 2022,			
401	Secondary Reflections Amongst Multiple IRSs: Friends or Foes?. 2022,			1
400	Maximizing the Number of Served Users in a Smart City using Reconfigurable Intelligent Surfaces. 2022,			
399	Low-complexity Beamforming Design for RIS Communications over Correlated Channels. 2022,			
398	A State-of-the-Art Survey on Reconfigurable Intelligent Surface-Assisted Non-Orthogonal Multiple Access Networks. 2022, 1-22			6
397	RIS-aided Joint Localization and Synchronization with a Single-Antenna Receiver: Beamforming Design and Low-Complexity Estimation. 2022, 1-1			1
396	Theory, Analysis, and Design of Metasurfaces for Smart Radio Environments. 2022, 1-17			1
395	Reconfigurable Intelligent Surfaces in Action: For Nonterrestrial Networks: Employing Reconfigurable Intelligent Surfaces. 2022, 2-10			0
394	Reconfigurable Intelligent Surface Enabled Interference Nulling and Signal Power Maximization in mmWave bands. 2022, 1-1			0
393	Channel Distribution Learning: Model-Driven GAN-Based Channel Modeling for IRS-Aided Wireless Communication. 2022, 1-1			2
392	A Tutorial on Decoding Techniques of Sparse Code Multiple Access. <i>IEEE Access</i> , 2022, 1-1	3.5		0
391	RIS-Assisted Robust Hybrid Beamforming Against Simultaneous Jamming and Eavesdropping Attacks. 2022, 1-1			4
390	A Tutorial on Terahertz-Band Localization for 6G Communication Systems. 2022, 1-1			10
389	Localization and Channel Reconstruction for Extra Large RIS-Assisted Massive MIMO Systems. 2022, 1-1			1
388	Energy-Efficient Design for IRS-Empowered Uplink MIMO-NOMA Systems. 2022, 1-1			1
387	Optimal Planning of Passive Reflective Skins for Next-Generation Smart EM Urban Environments. 2022,			
386	The Measurement-based Intelligent Reflecting Surfaces Path Loss Model. 2022,			
385	Smart EM Environments: Current Trends and Future Perspectives. 2022,			

384	Passive and Modular Surface Design for Tailoring EM Propagation in Urban Scenarios. 2022,		
383	Impact of a Transmitting-RIS on the Geometrical Structure of Indoor mmWave Channels. 2022,		
382	SbD-based Propagation Contouring through 1-bit Dual-Polarization Reconfigurable Intelligent Surfaces. 2022,		
381	Performance Analysis of Dual-Hop Relaying for THz/RF Systems. 2022,		
380	Mirror, Mirror on the Wall. 2022,		0
379	Time-Switching and Phase-Shifting Control for RIS-Assisted SWIPT Communications. 2022, 1-1		2
378	Planning of EM Skins for Improved Quality-of-Service in Urban Areas. 2022, 1-1		3
377	Learning Based User Scheduling in Reconfigurable Intelligent Surface Assisted Multiuser Downlink. 2022, 1-1		
376	On the Integration of Reconfigurable Intelligent Surfaces in Real-World Environments: A Convenient Approach for Estimation Reflection and Transmission.. 2022, 2-13		2
375	Outage Probability and Optimal Power Splitting Ratio Analysis for RIS-Aided SWIPT System. 2022,		
374	A Novel System of Mixed RF/FSO UAV Communication Based on MRR and RIS by Adopting Hybrid Modulation. 2022, 9, 379		0
373	RIS-assisted secure UAV communications with resource allocation and cooperative jamming.		1
372	6G for Vehicle-to-Everything (V2X) Communications: Enabling Technologies, Challenges, and Opportunities. 2022, 110, 712-734		12
371	Reconfigurable Intelligent Surface Enhancing In-door Wireless Communication. 2021,		
370	Overview of Metamaterials-Integrated Antennas for Beam Manipulation Applications: The Two Decades of Progress. <i>IEEE Access</i> , 2022, 1-1	3.5	0
369	Performance Analysis of Intelligent Reflecting Surface-Aided Decode-and-Forward UAV Communication Systems. 2022, 1-12		1
368	Exploiting Multiple RISs and Direct Link for Performance Enhancement of Wireless Systems with Hardware Impairments. 2022, 1-1		0
367	A Functional Architecture for 6G Special Purpose Industrial IoT Networks. 2022, 1-11		

366	Performance Assessment of Millimeter-Wave NOMA System With Intelligent Reflecting Surface. <i>IEEE Access</i> , 2022 , 10, 66143-66152	3.5	0
365	Two-Stage Channel Estimation for Hybrid RIS Assisted MIMO Systems. 2022 , 1-1		3
364	Beamforming Optimization for IRS-Assisted mmWave V2I Communication Systems via Reinforcement Learning. <i>IEEE Access</i> , 2022 , 10, 60521-60533	3.5	1
363	Reconfigurable Intelligent Surfaces for Downlink Cellular Networks. 2022 , 20-32		
362	Performance Analysis of RIS-Assisted UAV Communication Systems. 2022 , 1-1		1
361	Energy-Efficient Multi-User Localization in the RIS-Assisted IoT Networks. 2022 , 1-1		
360	Approximate Message Passing for Channel Estimation in Reconfigurable Intelligent Surface Aided MIMO Multi-User Systems. 2022 , 1-1		1
359	Demystifying Self-healing Property of Accelerating Beams for Obstacles Circumvention in Communication Applications. 2022 ,		
358	Prospects and Challenges of THz Precoding. 2022 , 31, 488-498		0
357	Optimizing Coverage with Intelligent Surfaces for Indoor mmWave Networks. 2022 ,		1
356	Cooperative RIS and Relaying IoV Networks: A Deep Study on Position Analysis. 2022 , 2022, 1-8		0
355	Joint Radar and Communication Empowered by Digital Programmable Metasurface. 2200083		1
354	Energy Efficient Hybrid Relay-IRS-Aided Wireless IoT Network for 6G Communications. 2022 , 11, 1900		0
353	Metasurface-Programmable Wireless Network-On-Chip. 2201458		3
352	Exploring reconfigurable intelligent surfaces for 6G: State-of-the-art and the road ahead.		1
351	Optimal relaying in molecular communications. 2022 , 32-33, 100404		0
350	Reconfigurable Intelligent Surface-Assisted Free-Space Optical Communication System under the Influence of Signal Blockage for Smart City Applications.		1
349	Sum Rate Optimization of IRS-Aided Uplink Multiantenna NOMA with Practical Reflection. 2022 , 22, 4449		1

- 348 Outage analysis of energy efficiency in a finite-element-IRS aided communication system. **2022**, 54, 101776
- 347 Intelligent and Reliable Millimeter Wave Communications for RIS-Aided Vehicular Networks. **2022**, 1-11
- 346 Wavefront Shaping for Wireless Communications in Complex Media: From Time Reversal to Reconfigurable Intelligent Surfaces. **2022**, 1-17 1
- 345 Joint Impact of Phase Error, Transceiver Hardware Impairments, and Mobile Interferers on RIS-Aided Wireless System Over α -Fading Channels. **2022**, 1-1
- 344 Beyond 5G RIS mmWave Systems: Where Communication and Localization Meet. *IEEE Access*, **2022**, 10, 68075-68084 3-5 1
- 343 QoS Aware Robot Trajectory Optimization with IRS-Assisted Millimeter-Wave Communications. **2022**, 1-1
- 342 Multi-IRS-Assisted mmWave MIMO Communication Using Twin-Timescale Channel State Information. **2022**, 1-1 1
- 341 Joint Beamforming Aided Over-the-Air Computation Systems Relying on Both BS-Side and User-Side Reconfigurable Intelligent Surfaces. **2022**, 1-1
- 340 Delay-optimal and Incentive-aware Computation Offloading for Reconfigurable Intelligent Surface-assisted Mobile Edge Computing. **2022**, 1-1
- 339 Ergodic Capacity Analysis for Relay-RIS System Under Three-dimensional Channel Model. **2022**, 1-1 1
- 338 Reconfigurable Intelligent Surfaces: Channel Characterization and Modeling. **2022**, 1-22 2
- 337 Design of an Intelligent Reflecting Surface Aided mmWave Massive MIMO Using X-Precoding. *IEEE Access*, **2022**, 10, 69428-69440 3-5 0
- 336 Cooperative Beamforming Design for Multiple RIS-Assisted Communication Systems. **2022**, 1-1
- 335 Performance optimization of reconfigurable intelligent surfaces in multipath channels. **2022**,
- 334 Reconfigurable Intelligent Surface-assisted Classification of Modulations using Deep Learning. **2022**,
- 333 Performance Analysis of IRS-Assisted Hybrid FSO/RF Communication System. **2022**,
- 332 A Novel RIS-Aided EMF-Aware Beamforming Using Directional Spreading, Truncation and Boosting. **2022**, 0
- 331 Wireless Channel Estimation in Shipbuilding Scenario Based on Reconfigurable Intelligent Surface. **2022**,

330	Arbitrary Beam Pattern Approximation via RISs with Measured Element Responses. 2022,	3
329	Physical Layer Security for Intelligent Reflecting Surface-Assisted VLC/RF Hybrid Network. 2022,	
328	A Novel RIS-Aided EMF Exposure Aware Approach using an Angularly Equalized Virtual Propagation Channel. 2022,	0
327	Cyclic-Prefixed Single-Carrier Transmission with Reconfigurable Intelligent Surfaces. 2022,	
326	Secure Downlink Transmission in Cell-Free Massive MIMO System Enhanced by Intelligent Reflecting Surfaces. 2022, 2022, 1-16	
325	Flexible Beam Manipulations by Reconfigurable Intelligent Surface With Independent Control of Amplitude and Phase. 9,	
324	Intelligent Reflecting Surfaces Assisted UAV Communications for Massive Networks: Current Trends, Challenges, and Research Directions. 2022, 22, 5278	4
323	Multiple reconfigurable intelligent surfaces assisted downlink NOMA system.	
322	Phase Shift Design in RIS Empowered Wireless Networks: From Optimization to AI-Based Methods. 2022, 2, 398-418	1
321	BER analysis of tightly packed planar RIS system using the level of spatial correlation and discrete phase shifter.	
320	Reconfigurable intelligent surfaces-assisted terahertz communications. 2022,	1
319	Anti-reflection structure for perfect transmission through complex media. 2022, 607, 281-286	2
318	A Survey on Intelligent-Reflecting-Surface-Assisted UAV Communications. 2022, 15, 5143	3
317	Optimal Active Elements Selection in RIS-Assisted Edge Networks for Improved QoS. 2022,	1
316	Uplink Multiple Access for Reconfigurable Intelligent Surface-Aided Wireless Systems. 2022, 2022, 1-14	
315	Characteristics of Channel Eigenvalues and Mutual Coupling Effects for Holographic Reconfigurable Intelligent Surfaces. 2022, 22, 5297	
314	Fine-Grained Analysis of Reconfigurable Intelligent Surface-Assisted mmWave Networks. 2022, 1-1	0
313	Superposition-Based URLLC Traffic Scheduling in 5G and Beyond Wireless Networks. 2022, 1-1	1

312	Pervasive Machine Learning for Smart Radio Environments Enabled by Reconfigurable Intelligent Surfaces. 2022 , 1-32	4
311	Ergodic Achievable Rate Analysis and Optimization of RIS-assisted Millimeter-Wave MIMO Communication Systems. 2022 , 1-1	
310	Space-orthogonal Scheme for IRSs-aided Multi-user MIMO in mmWave/THz Communications. 2022 ,	2
309	Sum Rate Maximization for Multi-IRS Assisted Downlink NOMA with Mobile Users. 2022 ,	1
308	Energy-Efficiency Maximization of Multiple RISs-Enabled Communication Networks by Deep Reinforcement Learning. 2022 ,	
307	Dumb RIS-Assisted Random Beamforming for Energy Efficiency Enhancement of Wireless Communications. 2022 ,	
306	Joint Sensing and Communication for Situational Awareness in Wireless THz Systems. 2022 ,	
305	Full-Duplex meets Reconfigurable Surfaces: RIS-assisted SIC for Full-Duplex Radios. 2022 ,	1
304	Sum Rate Maximization in STAR-RIS Assisted Full-Duplex Communication Systems. 2022 ,	2
303	Beamforming Design for Power Transferring and Secure Communication in RIS-Aided Network. 2022 ,	
302	Low Complexity Multi-User Indoor Localization Using Reconfigurable Intelligent Surface. 2022 ,	1
301	On the Impact of Hardware Impairments on RIS-aided Localization. 2022 ,	
300	Ergodic Capacity Analysis of RIS-Aided Systems with Spatially Correlated Channels. 2022 ,	0
299	Performance Analysis of RIS-equipped-UAV Based Emergency Wireless Communications. 2022 ,	0
298	Opportunistic Beamforming with Beam Selection in IRS-aided Communications. 2022 ,	
297	Design and Planning of Static and Reconfigurable EM Skins for Smart Electromagnetic Environments. 2022 ,	
296	LSTM-based Spectral Efficiency Prediction by Capturing Wireless Terminal Movement in IRS-Assisted Systems. 2022 ,	
295	Canonical Training is Bad for Reconfigurable Intelligent Surfaces. 2022 ,	1

- 294 Sacrificing CSI for a Greater Good: RIS-enabled Opportunistic Rate Splitting. **2022,**
- 293 Controller Manipulation Attack on Reconfigurable Intelligent Surface Aided Wireless Communication. **2022,** 0
- 292 Beamforming Design for Intelligent Reflecting Surface Aided Full-Duplex Relay Systems. **2022,**
- 291 Joint Beamforming Design for Sub-Connected Active Reconfigurable Intelligent Surface. **2022,** 1
- 290 Channel Estimation for Intelligent Reflecting Surface Assisted MmWave Systems Using Analog Feedback. **2022,**
- 289 Interference Mitigation in RIS-assisted 6G Systems for Indoor Industrial IoT Networks. **2022,** 0
- 288 Alternating Minimization Algorithm for Multiuser RIS-assisted MIMO Systems. **2022,**
- 287 RIS-Assisted Vehicular Network with Direct Transmission over Double-Generalized Gamma Fading Channels. **2022,** 0
- 286 Spectral Efficiency optimization for mmWave Wideband MIMO RIS-assisted Communication. **2022,** 2
- 285 Multi-beam, Scalable 28 GHz Relay Array with Frequency and Spatial Division Multiple Access Using Passive, High-Order N-Path Filters. **2022,** 1
- 284 When Federated Learning and Mobile Intelligent Reflecting Surfaces Assist V2V Communications. **2022,** 0
- 283 Enhancing Physical Layer Security in Large Intelligent Surface-aided Cooperative Networks. **2022,** 0
- 282 Intelligent-Meta-Surfaces-Aided Wireless Communications in 6G. **2022,**
- 281 GITz: Graphene-assisted IRS Design for THz Communication. **2022,**
- 280 Reconfigurable Intelligent Surface Empowered Multi-Hop Transmission over Generalized Fading. **2022,**
- 279 Reflecting Surface Assisted Energy Harvesting with Optimized NOMA Downlink Transmissions. **2022,**
- 278 Active Reconfigurable Intelligent Surfaces for User Localization in mmWave MIMO Systems. **2022,** 2
- 277 Performance Evaluation of Reconfigurable Intelligent Surface against Distributed Antenna System at the Cell Edge. **2022,** 11, 2376 1

276	Machine Learning for Intelligent-Reflecting-Surface-Based Wireless Communication towards 6G: A Review. 2022 , 22, 5405	4
275	Secrecy Outage Performance Analysis for IRS-Aided Cognitive Radio NOMA Networks. 2022 ,	
274	Creating and Operating Areas With Reduced Electromagnetic Field Exposure Thanks to Reconfigurable Intelligent Surfaces. 2022 ,	0
273	Multidimensional Orthogonal Matching Pursuit-based RIS-aided Joint Localization and Channel Estimation at mmWave. 2022 ,	1
272	Demod-CNN: A Robust Deep Learning Approach for Intelligent Reflecting Surface-Assisted Multiuser MIMO Communication. 2022 , 22, 5971	0
271	Joint power and blocklength optimization for RIS-aided multiple-access downlink ultra-reliable low-latency communication.	
270	Active and tunable nanophotonic metamaterials. 2022 , 11, 3769-3803	2
269	Cooperative Communication Resource Allocation Strategies for 5G and Beyond Networks: A Review of Architecture, Challenges and Opportunities. 2022 ,	1
268	STAR-RIS-assisted scheme for enhancing physical layer security in NOMA systems.	0
267	Fairness optimization in IRS-assisted MEC computational offloading. 2022 , 101855	
266	Secure Performance Analysis of Aerial RIS-NOMA-Aided Systems: Deep Neural Network Approach. 2022 , 11, 2588	
265	Intelligent Reflecting Surfaces with Adaptive Transmit Power for Underlay Cognitive Radio Networks. 2022 , 2022, 1-7	
264	Digital Twin of Wireless Systems: Overview, Taxonomy, Challenges, and Opportunities. 2022 , 1-1	7
263	Path Loss Modeling and Measurements for Reconfigurable Intelligent Surfaces in the Millimeter-Wave Frequency Band. 2022 , 70, 6259-6276	3
262	PhysFad: Physics-Based End-to-End Channel Modeling of RIS-Parametrized Environments with Adjustable Fading. 2022 , 1-1	6
261	Compressive Channel Estimation Based on the Deep Denoising Network in an IRS-Enhanced Massive MIMO System. 2022 , 2022, 1-10	0
260	Intelligent Reflecting Surface-Aided LEO Satellite Communication: Cooperative Passive Beamforming and Distributed Channel Estimation. 2022 , 40, 3057-3070	4
259	Degrees of Freedom in 3D Linear Large-Scale Antenna Array Communications: A Spatial Bandwidth Approach. 2022 , 40, 2805-2822	1

- 258 Combining multi-RIS and relay for performance improvement of multi-user NOMA systems. **2022**, 217, 109353 ○
- 257 Leveraging Secondary Reflections and Mitigating Interference in Multi-IRS/RIS Aided Wireless Network. **2022**, 1-1 ○
- 256 RIS-assisted mmWave Networks with Random Blockages: Fewer Large RISs or More Small RISs?. **2022**, 1-1 ○
- 255 Quan-Transformer based Channel Feedback for RIS-Aided Wireless Communication Systems. **2022**, 1-1 ○
- 254 A Downlink RIS-Aided NOMA System With Hardware Impairments: Performance Characterization and Analysis. **2022**, 3, 288-305 1
- 253 Reconfigurable Intelligent Surface Assisted Space-Time Line Code for SIMO Transmission. **2022**, 1-1 ○
- 252 Cooperative Communication for the Rank-Deficient MIMO Interference Channel with a Reconfigurable Intelligent Surface. **2022**, 1-1 ○
- 251 Channel Aging-Aware Precoding for RIS-Aided Multi-User Communications. **2022**, 1-13 ○
- 250 Throughput Enhancement for NOMA Systems Using Intelligent Reflecting Surfaces. **2022**, 73, 5233-5244 ○
- 249 Effect of Impulsive Noise on IRS-Aided Communication Systems. **2022**, 1-6 ○
- 248 Energy-Efficient Trajectory Design of a Multi-IRS Assisted Portable Access Point. **2022**, 1-12 ○
- 247 On Performance of IRS-Assisted Hybrid Satellite-Terrestrial Cooperative Communication. **2022**, 1-22 ○
- 246 Rate-splitting Multiple Access and Dynamic User Clustering for Sum-Rate Maximization in Multiple RISs-aided Uplink mmWave System. **2022**, 1-1 1
- 245 Joint Beamforming Designs for Active Reconfigurable Intelligent Surface: A Sub-Connected Array Architecture. **2022**, 1-1 ○
- 244 Compressive Sensing and Reconfigurable Reflection of Electromagnetic Waves. **2022**, 1-1 1
- 243 Physical Layer Enhancement for Next-Generation Railway Communication Systems. **2022**, 10, 83152-83175 ○
- 242 On the Enabling of Multi-Receiver Communications With Reconfigurable Intelligent Surfaces. **2022**, 21, 413-423 ○
- 241 Digitally Reconfigurable Metasurface Array for a Multipath Based Wireless Link With Media-Based Modulation. **2022**, 1-9 1

240	Impact of Channel Aging on Reconfigurable Intelligent Surface Aided Massive MIMO Systems with Statistical CSI. 2022 , 1-15	1
239	Performance Analysis of Reconfigurable Intelligent Surface Assisted Two-Way NOMA Networks. 2022 , 1-15	1
238	RIS Grouping Based Index Modulation for 6G Telecommunications. 2022 , 1-1	0
237	An Efficient Power Allocation Algorithm for Green Reconfigurable Intelligent Surface Assisted Vehicular Network. 2022 , 1-14	0
236	Radio Localization and Sensing [Part II: State-of-the-art and Challenges]. 2022 , 1-1	0
235	Reconfigurable Intelligent Surface aided Emitter Localization. 2022 , 1-1	0
234	Simultaneous Transmit Diversity and Passive Beamforming with Large-Scale Intelligent Reflecting Surface. 2022 , 1-1	0
233	Feasibility of a Plasma-Based Intelligent Reflective Surface. 2022 , 10, 97995-98003	2
232	An Improved Path-Loss Model for Reconfigurable-Intelligent-Surface-Aided Wireless Communications and Experimental Validation. 2022 , 10, 98065-98078	1
231	Channel Estimation for Reconfigurable Intelligent Surface Assisted High-Mobility Wireless Systems. 2022 , 1-16	1
230	Downlink Performance Analysis of Intelligent Reflecting Surface-Enabled Networks. 2022 , 1-16	0
229	Dynamic Modelling of Liquid Crystal-Based Metasurfaces and its Application to Reducing Reconfigurability Times. 2022 , 1-1	3
228	Intelligent Reflecting Surface Aided Wireless Information Surveillance. 2022 , 1-1	1
227	6G Cloud-Native System: Vision, Challenges, Architecture Framework and Enabling Technologies. 2022 , 10, 96602-96625	0
226	Random Guessing for Beam Alignment: A Low Complexity Strategy for Reducing Blockage in mmWave Communications. 2022 , 10, 80989-80998	0
225	Radio Localization and Sensing [Part I: Fundamentals]. 2022 , 1-1	1
224	Energy-Efficient Joint Broadcast-Unicast Communications via Dual-Polarized Aerial RIS. 2022 , 1-1	1
223	Capacity Improvement for Intelligent Reflecting Surface-Assisted Wireless Systems With a Small Portion of Active Elements. 2022 , 10, 100438-100445	1

222	Distributed Reconfigurable Intelligent Surfaces Assisted Indoor Positioning. 2022 , 1-1	0
221	Physical-Layer Secure Wireless Transmission via Active Reconfigurable Intelligent Surfaces. 2022 ,	0
220	Intelligent Reflecting Surface - aided UAV Communications:A survey and Research Opportunities. 2022 ,	0
219	The Road to Smart Electromagnetic Environments: The Future of Wireless Communications. 2022 ,	0
218	Equivalent Circuit Model for Varactor-Loaded Reconfigurable Intelligent Surfaces. 2022 ,	0
217	Capacity-Oriented RIS Control Through a Genetic Algorithm with Learning Capability. 2022 ,	0
216	Security and Threats of Intelligent Reflecting Surface Assisted Wireless Communications. 2022 ,	0
215	Reconfigurable Impedance Metasurfaces for High-Accuracy Beamforming. 2022 ,	0
214	Outage Statistics of Hybrid Double-RIS System Assisted by Aerial AF-Relay for Multi-hop Communications. 2022 ,	0
213	A beam-tracking framework for THz networks. 3,	0
212	Propagation Characteristics of RIS-assisted Wireless Channels in Corridors: Measurements and Analysis. 2022 ,	0
211	Joint Power Allocation and Phase Shift Design for IRS-aided NOMA-URLLC Systems. 2022 ,	0
210	Design of Block IRS with Low Complexity for SWIPT Systems. 2022 ,	0
209	Channel Estimation for a RIS-Assisted MU-MIMO System Using One-Bit ADCs over Spatially Correlated Channels. 2022 ,	0
208	An Overview of Signal Processing Techniques for RIS/IRS-Aided Wireless Systems. 2022 , 16, 883-917	15
207	An in-depth study of uplink performance of 5G mmWave networks. 2022 ,	1
206	Intelligent reflecting surface-aided network planning.	0
205	Enabling Cognitive Radio in NOMA-Assisted Reconfigurable Intelligent Surfaces: Outage Performance Analysis. 2023 , 569-581	0

204	Ergodic Capacity Analysis of RIS-aided System Relying on User Grouping and Fixed Power Allocation. 2023 , 637-646	0
203	Optimal Element Allocation for RIS-Aided Physical Layer Security. 2022 , 2022, 1-7	0
202	Optimum Reconfigurable Intelligent Surface Selection for Wireless Networks. 2022 , 70, 6241-6258	0
201	Performance Optimization of Intelligent- Reflecting-Surfaces assisted-FSO link.	0
200	Intelligent Reflecting Surfaces with Adaptive Transmit Power and Energy Harvesting for Cognitive Radio Networks.	0
199	Communication Models for Reconfigurable Intelligent Surfaces: From Surface Electromagnetics to Wireless Networks Optimization. 2022 , 110, 1164-1209	5
198	High-conductivity screen-printable silver nanowire Ink for optically transparent flexible radio frequency electronics.	1
197	Boosting NOMA systems through smart metasurfaces. 3,	0
196	Intelligent reflecting surface assisted integrated sensing and communication system. 2022 ,	0
195	Electronically Steerable Antennas for Future Heterogeneous Communication Networks: Review and Perspectives. 2022 , 2, 545-581	2
194	Outage and throughput performance of hybrid RISs-relay-aided-wireless systems with imperfect transceiver hardware. 2022 , 157, 154425	0
193	Input-Output Relation and Performance of RIS-Aided OTFS with Fractional Delay-Doppler. 2022 , 1-1	0
192	Massive MIMO Communication with Intelligent Reflecting Surface. 2022 , 1-1	0
191	A Comprehensive Analysis on Bandwidth Management in 6G: Sharing, Reuse or Introducing New Bandwidth?. 2022 , 89-100	0
190	On the Physical Layer Security Performance over RIS-aided Dual-hop RF-UOWC Mixed Network. 2022 , 1-12	1
189	Reconfigurable Intelligent Surfaces Enabled by Silicon Chips for Secure and Robust mmWave and THz Wireless Communication. 2022 ,	0
188	Designing, building, and characterizing RF switch-based reconfigurable intelligent surfaces. 2022 ,	0
187	Field trial measurement and channel modeling for reconfigurable intelligent surface. 2022 ,	0

- 186 Performance analysis for multi-RIS UAV NOMA mmWave communication systems. ○
- 185 Unmanned Aerial Vehicle-Assisted Reconfigurable Intelligent Surface for Energy Efficient and Reliable Communication. **2023**, 173-201 ○
- 184 Outage Probability Analysis and Transmit Power Optimization for Blind-Reconfigurable Intelligent Surface-Assisted Non-Orthogonal Multiple Access Uplink. **2022**, 14, 13188 ○
- 183 Blind RIS Aided Ordered NOMA: Design, Probability of Outage Analysis and Transmit Power Optimization. **2022**, 14, 2266 ○
- 182 Accelerated PARAFAC-Based Channel Estimation for Reconfigurable Intelligent Surface-Assisted MISO Systems. **2022**, 22, 7463 ○
- 181 Two-timescale design for RIS-aided full-duplex MIMO systems with transceiver hardware impairments. ○
- 180 An Optically Transparent Reconfigurable Intelligent Surface with Low Angular Sensitivity. 2202081 ○
- 179 Intelligent reflecting surface empowered WPCN system over generalized fading channels: Performance analysis and optimization. ○
- 178 A vision towards integrated 6G communication networks: Promising technologies, architecture, and use-cases. **2022**, 55, 101917 ○
- 177 All-dielectric metasurface for linear-polarization conversion with an arbitrary polarization rotating angle. **2023**, 157, 108762 ○
- 176 NOMA with Adaptive Transmit Power Using Intelligent Reflecting Surfaces. **2023**, 45, 2059-2070 ○
- 175 RIS-Aided Mobile Localization Error Bounds Under Hardware Impairments. **2022**, 1-1 ○
- 174 Secrecy Energy Efficiency Maximization for Distributed Intelligent Reflecting Surfaces Assisted MISO Secure Communications. **2022**, 1-1 ○
- 173 A 2D-programmable and Scalable Reconfigurable Intelligent Surface Remotely Controlled via Digital Infrared Code. **2022**, 1-1 ○
- 172 RIS-assisted Scheduling for High-Speed Railway Secure Communications. **2022**, 1-15 ○
- 171 RIS-Assisted UAV for Timely Data Collection in IoT Networks. **2022**, 1-12 1
- 170 Spectral Efficiency Analysis of Hybrid Relay-Reflecting Intelligent Surface-Assisted Cell-Free Massive MIMO Systems. **2022**, 1-1 ○
- 169 Design of Intelligence Reflector Metasurface Using Deep Learning Neural Network for 6G Adaptive Beamforming. **2022**, 10, 117900-117913 1

168	Polarization-Enabled MIMO Bidirectional Device-to-Device Communications via RIS. 2022 , 1-1	0
167	Multi-IRS-Aided Multi-User MIMO in mmWave/THz Communications: A Space-Orthogonal Scheme. 2022 , 1-1	1
166	Cram�r-Rao Bounds for Holographic Positioning. 2022 , 1-16	0
165	Design of Reconfigurable Intelligent Surface-Aided Cross-Media Communications. 2022 , 1-1	0
164	Reconfigurable Intelligent Surface for mmWave Mobile Communications: What If LoS Path Exists?. 2022 , 1-1	0
163	Sum Rate Maximization in IRS-Assisted Wireless Powered Multiuser MIMO Networks with Practical Phase Shift. 2022 , 1-1	0
162	RSMA for IRS Aided 6G Communication Systems: Joint Active and Passive Beamforming Design. 2021 ,	0
161	Sensing-based Two-timescale Channel Estimation for RIS-assisted Hybrid Millimeter Wave Systems. 2022 ,	0
160	Modulating Data Using Reconfigurable Intelligent Surface by Symbol Level Precoding. 2022 ,	0
159	On performance of multi-RIS assisted multi-user nonorthogonal multiple access system over Nakagami-m fading channels. 2022 ,	1
158	The Challenges and Compatibility of Mobility Management Solutions for Future Networks. 2022 , 12, 11605	0
157	Reconfigurable Intelligent Surfaces Empowered THz Communication in LEO Satellite Networks. 2022 , 1-1	0
156	Angular and Polarization Stability of Broadband Reconfigurable Intelligent Surfaces of Binary Type. 2022 , 10, 126253-126268	0
155	RIS-Assisted Visible Light Communication Systems: A Tutorial. 2022 , 1-1	3
154	Hybrid Double-RIS and DF-Relay for Outdoor-to-Indoor Communication. 2022 , 10, 126651-126663	2
153	On the Quality of Service and Experience in IRS-NOMA Over Γ -Generalized Fading Channels. 2022 , 3, 2272-2283	0
152	On the Performance of RIS-Assisted Communications With Direct Link Over Γ -Shadowed Fading. 2022 , 3, 2314-2328	0
151	Sparsity-Aware Channel Estimation for Fully Passive RIS-Based Wireless Communications: Theory to Experiments. 2022 , 1-1	0

150	Sparse Channel Estimation with Surface Clustering for IRS-Assisted OFDM Systems. 2022 , 1-1	0
149	Reconfigurable Intelligent Surface-aided M -ary FM-DCSK System: A New Design for Noncoherent Chaos-based Communication. 2022 , 1-15	1
148	The Reconfigurable Intelligent Surface-Aided Multi-Node IoT Downlink: Beamforming Design and Performance Analysis. 2022 , 1-1	0
147	Throughput Enhancement of Dynamic Full-Duplex Cellular System by Distributing Base Station Reception Function. 2023 , 4, 114-126	0
146	Improving the performance of multi-IRS aided millimeter-wave communication systems by transmit antenna selection. 2023 , 56, 101957	0
145	Energy-Aware Design of UAV-mounted RIS Networks for IoT Data Collection. 2022 , 1-1	0
144	On secrecy performance analysis for downlink RIS-aided NOMA systems. 2022 ,	0
143	Active RIS vs. Passive RIS: Which Will Prevail in 6G?. 2022 , 1-1	6
142	Joint BS-RIS-User Association and Beamforming Design for RIS-assisted Cellular Networks. 2022 , 1-15	0
141	Fundamental Analysis of 3D 6G-Localization Using Reconfigurable Intelligent Surface. 2022 , 255-266	0
140	Communication by Means of Thermal Noise: Towards Networks with Extremely Low Power Consumption. 2022 , 1-1	0
139	Secure Outage Analysis of RIS-Assisted Communications With Discrete Phase Control. 2022 , 1-6	2
138	mm-Wave Metasurface Unit Cells Achieving Millisecond Response Through Polymer Network Liquid Crystals. 2022 , 10, 127928-127938	1
137	Information Flows at the Deep Physical Layer Level. 2023 , 59-87	0
136	Beamforming in Hybrid RIS assisted Integrated Sensing and Communication Systems. 2022 ,	3
135	Reconfigurable Intelligent Surfaces: A Physical Layer Security Perspective. 2022 ,	0
134	Reconfigurable Intelligent Surface Assisted Interference Mitigation for 6G Full-Duplex MIMO Communication Systems. 2022 ,	0
133	RIS Enabled Multi-User SWIPT for URLLC. 2022 ,	0

132	Cooperative Jamming Aided Secure Communication with Intelligent Reflecting Surface. 2022,	0
131	RIS-aided OTFS Modulation in High-Doppler Channels. 2022,	1
130	Wireless Power Transfer Aided with Reconfigurable Intelligent Surfaces: Design, and Coverage Analysis. 2022,	0
129	Performance of RIS-Aided Wireless Systems in the Presence of Mobile Interferers. 2022,	0
128	Sum Rate Maximization for RIS-Assisted Hybrid Beamforming Systems. 2022,	0
127	Channel Modeling and Outage Performance of Cascaded RIS-empowered Wireless Networks. 2022,	0
126	An Open Platform for Simulating the Physical Layer of 6G Communication Systems with Multiple Intelligent Surfaces. 2022,	0
125	Performance Optimization of FSO link via Intelligent Reflecting Surfaces (IRS). 2022,	0
124	RSSI Fingerprint Height Based Empirical Model Prediction for Smart Indoor Localization. 2022, 22, 9054	1
123	Five Facets of 6G: Research Challenges and Opportunities.	0
122	Discrete Phase Shifts of Intelligent Reflecting Surface Systems Considering Network Overhead. 2022, 24, 1753	0
121	Tensor-Based Channel Estimation for RIS-Assisted Communications with Non-Ideal Phase Shift Responses. 2022,	0
120	Distributed Multi-IRS-assisted 6G Wireless Networks: Channel Characterization and Performance Analysis. 2022, 189-211	0
119	Intelligent Reflecting Surfaces (IRS)-Aided Cellular Networks and Deep Learning-Based Design. 2022, 149-170	0
118	IRS Hardware Architectures. 2022, 83-98	0
117	On secrecy performance analysis of multi-antenna STAR-RIS-assisted downlink NOMA systems. 2022, 2022,	0
116	Slepian eigenvalues as tunnelling rates. 2022, 169204	0
115	Over-the-air beamforming with reconfigurable intelligent surfaces. 3,	0

114	Resource allocation for Vehicle-to-Everything communications: A survey.	0
113	Intelligent Reflecting Surface-Assisted Physical Layer Key Generation with Deep Learning in MIMO Systems. 2023 , 23, 55	1
112	Channel estimation for reconfigurable intelligent surface-assisted mmWave based on Rényi entropy function. 2022 , 12,	0
111	RIS-assisted NOMA with Interference-Cancellation and Interference-Alignment Scheme. 2023 , 1-1	0
110	Transmission Design for Active RIS-Aided Simultaneous Wireless Information and Power Transfer. 2023 , 1-1	0
109	Outage behavior of the downlink reconfigurable intelligent surfaces-aided cooperative non-orthogonal multiple access network over Nakagami-m fading channels.	0
108	Low-Complexity Beamforming Design for a Cooperative Reconfigurable Intelligent Surface-Aided Cell-Free Network. 2023 , 23, 903	0
107	Model Predictive Control-based 3D Navigation of a RIS-Equipped UAV for LoS Wireless Communication with a Ground Intelligent Vehicle. 2022 , 1-13	0
106	The Optimal Layer of User-Specific Reconfigurable Intelligent Surfaces Structure for Uplink Communication System. 2022 , 44-54	0
105	Channel Training & Estimation for Reconfigurable Intelligent Surfaces: Exposition of Principles, Approaches, and Open Problems. 2023 , 1-1	0
104	A 1-bit Time-Modulated Reflectarray for Reconfigurable Intelligent Surface Applications. 2023 , 1-1	0
103	User-Driven Relay Beamforming for mmWave Massive Analog-Relay MIMO. 2023 , 23, 1034	0
102	Energy efficiency maximisation for STAR-RIS assisted full-duplex communications.	0
101	Performance of IRS-Aided FD Two-Way Communication Network With Imperfect SIC. 2023 , 1-6	0
100	A Broadband 1-Bit Single-Layer Reconfigurable Reflectarray Unit Cell Based on PIN Diode Model. 2023 , 1-1	0
99	An Electromagnetic-Information-Theory Based Model for Efficient Characterization of MIMO Systems in Complex Space. 2023 , 1-1	0
98	Achievable rate as affected by active elements distribution in reconfigurable intelligent surfaces for wireless communication. 9, e1207	0
97	Simultaneously Transmitting and Reflecting (STAR) RIS Assisted Over-the-Air Computation Systems. 2023 , 1-1	0

96	Energy Efficiency Fairness of Active Reconfigurable Intelligent Surfaces-Aided Cell-Free Network. 2023 , 1-1	0
95	SER performance of millimeter-wave communications with multiple reconfigurable intelligent surfaces and transmit antenna selection. 2023 , 160, 154517	0
94	Configuring an Intelligent Reflecting Surface using Strongest Tap Maximization Heuristic Technique. 2022 ,	0
93	Joint RIS Calibration and Multi-User Positioning. 2022 ,	0
92	Joint Placement and Passive Beamforming Design for Aerial Reconfigurable Intelligent Surface Enhanced NOMA Systems. 2022 ,	0
91	optimizing IRS-Assisted Uplink NOMA System for Power Constrained IoT Networks. 2022 ,	0
90	IRS-Assisted Beamspace Millimeter-wave Massive MIMO with Interference-Aware Beam Selection. 2022 ,	0
89	Indoor Enhancement of mmWave Based on Reconfigurable Intelligent Surface: IRS or DF Relay Connection?. 2022 ,	0
88	Secrecy Performance of RIS-Aided Wireless Systems in the Presence of Mobile Interferers and Eavesdropper Mobility. 2022 ,	0
87	Performance of RIS-empowered NOMA-based D2D Communication under Nakagami-m Fading. 2022 ,	0
86	Optimal Path Selection in Cascaded Intelligent Reflecting Surfaces. 2022 ,	0
85	User Angle Estimation Based on Intelligent Reflecting Surface Assisted Communication. 2022 ,	0
84	UAV-Assisted Wireless Communication System with Reconfigurable Intelligent Surfaces: Outage Probability Approach. 2022 ,	0
83	Maximizing the Geometric Mean of User-Rates to Improve Rate-Fairness in Double RIS-Assisted System. 2022 ,	0
82	SCMA-LDPC coded communication system. 2022 ,	0
81	RIS-assisted Task Offloading for Wireless Dead Zone to Minimize Delay in Edge Computing. 2022 ,	0
80	Position-Aided On/Off States Judgment for 1-Bit RIS Assisted V2V MmWave Communication. 2022 ,	0
79	A Study on Multi-Antenna and Pertinent Technologies with AI/ML Approaches for B5G/6G Networks. 2023 , 12, 189	3

- 78 Cascaded Channel Estimation for Distributed IRS Aided mmWave Massive MIMO Systems. **2022**, ○
- 77 Best IRS Selection Versus Distributed IRS with Phase-shift Errors. **2022**, ○
- 76 Optimal Friendly Jamming and Transmit Power Allocation in RIS-assisted Secure Communication. **2022**, ○
- 75 Achievable Rate of Multiuser Scheduling in RIS-based Massive MIMO Systems. **2022**, ○
- 74 Circularly Optimizing Secrecy Rate in RIS-Aided Multiuser Secure Communications. **2022**, ○
- 73 UAV-mounted Intelligent Reflecting Surface (IRS) MISO Communications. **2022**, ○
- 72 ARIS for Safeguarding MISO Wireless Communications: A Deep Reinforcement Learning Approach. **2022**, ○
- 71 Configuring Reconfigurable Intelligent Surface for Parallel MIMO Visible Light Communications with Asymptotic Capacity Maximization. **2023**, 13, 563 ○
- 70 Tight Bounds on the Optimal UL Sum-Rate of MU RIS-aided Wireless Systems. **2022**, ○
- 69 RIS-Aided Angular-Based Hybrid Beamforming Design in mmWave Massive MIMO Systems. **2022**, ○
- 68 Electromagnetic Field Exposure Avoidance thanks to Non-Intended User Equipment and RIS. **2022**, ○
- 67 Channel Orthogonalization with Reconfigurable Surfaces. **2022**, ○
- 66 Bi-Static Sensing for Near-Field RIS Localization. **2022**, ○
- 65 Capacity Analysis of RIS-assisted Visible Light Communication Systems with Hybrid NOMA. **2022**, ○
- 64 Joint User, Channel, Modulation-Coding Selection, and RIS Configuration for Jamming Resistance in Multiuser OFDMA Systems. **2023**, 1-1 ○
- 63 On Practical RIS-Aided OFDM with Index Modulation. **2023**, 1-1 ○
- 62 Analysis of Individual User Data Rate in a TDMA-RIS-NOMA Downlink System: Beyond the Limitation of Conventional NOMA. **2023**, 12, 618 ○
- 61 A Multi-Hop Strategy for the Planning of EM Skins in a Smart Electromagnetic Environment. **2023**, 1-1 ○

60	Performance Analysis of Smart Grid Wide Area Network With RIS Assisted Three Hop System. 2023 , 9, 48-59	0
59	Design of a Reconfigurable Intelligent Surface-Assisted FM-DCSK-SWIPT Scheme with Non-linear Energy Harvesting Model. 2023 , 1-1	0
58	Metamaterials and Their Application in the Performance Enhancement of Reconfigurable Antennas: A Review. 2023 , 14, 349	3
57	A Resource Allocation Policy for Downlink Communication in Distributed IRS Aided Multiple-Input Single-Output Systems. 2023 , 1-1	0
56	Transceiver and Phase Optimization for RIS-assisted Hardware-impaired MIMO Cellular Systems. 2022 ,	0
55	Computation Rate Optimization for RIS-Assisted Multi-server MEC System. 2022 ,	0
54	?????????????????????????????????????. 2023 , 52, 20220377	0
53	Semi-Blind Joint Channel and Symbol Estimation for IRS-Assisted MIMO Systems. 2023 , 1-16	0
52	On the Road to 6G: Visions, Requirements, Key Technologies and Testbeds. 2023 , 1-1	0
51	Passive Type Reconfigurable Intelligent Surface: Measurement of Radiation Patterns. 2023 , 14, 818	0
50	Optimization design of RIS-assisted high-capacity visible light communications based on HDMA. 2023 , 58, 102056	0
49	Semi-blind receivers based on a coupled nested Tucker-PARAFAC model for dual-polarized MIMO systems using combined TST and MSMKron codings. 2023 , 104043	0
48	RIS Assisted Multiple User Interference Mitigation via an Accelerated Coordinate Descent Method. 2023 , 9, 159-169	0
47	Uplink Power Analysis of RIS-assisted Communication Over Shared Radar Spectrum. 2022 ,	0
46	A survey on reconfigurable intelligent surfaces: Wireless communication perspective. 2023 , 17, 497-537	0
45	Improving the performance of wireless half-duplex and full-duplex relaying networks with intelligent reflecting surface. 2023 , 360, 3095-3118	0
44	Enhancing active reconfigurable intelligent surface. 2022 , 3, 351-363	0
43	Digital-care in next generation networks: Requirements and future directions. 2023 , 224, 109599	0

- 42 Emerging MIMO Technologies for 6G Networks. **2023**, 23, 1921 ○
- 41 Intelligent Reflecting Surfaces for Sum-Rate Maximization in Cognitive Radio Enabled Wireless Powered Communication Network. **2023**, 11, 16021-16031 ○
- 40 Joint Waveform and Beamforming Design for RIS-Aided ISAC Systems. **2023**, 30, 165-169 ○
- 39 Performance analysis of Intelligent Reflecting Surface-assisted Wireless Communications Under Various Application Scenarios. **2022**, ○
- 38 Impact of Nakagami-m Fading Channel on Reconfigurable Intelligent Surface Symbol Error Rate in Non-line-of-sight scenarios. **2022**, ○
- 37 Beamforming Technologies for Ultra-Massive MIMO in Terahertz Communications. **2023**, 4, 614-658 1
- 36 Power and Element Allocation Design for RIS-NOMA IoV Networks. **2023**, 12, 1003 ○
- 35 An End-Fed Programmable Metasurface Based on Substrate Integrated Waveguide for Novel Phased Array. 2201251 ○
- 34 Ergodic performance analysis of intelligent reflecting surface network with phase errors. **2023**, ○
- 33 STAR-RISs Assisted NOMA Networks: A Distributed Learning Approach. **2023**, 17, 264-278 ○
- 32 Reconfigurable Intelligent Surfaces: Redefining the Entirety of Wireless Communication Systems in Leaps and Bounds. **2023**, 319-331 ○
- 31 Joint information transmission design for intelligent reflecting surface aided system with discrete phase shifts. **2023**, 66, ○
- 30 An Active Reflection Phase Shifter with High Gain for Reconfigurable Reflectarrays above 0.24 THz. **2023**, ○
- 29 Maximizing the network outage rate for fast fluid antenna multiple access systems. ○
- 28 Impact of Reconfigurable Intelligent Surface Geometry on Communication Performance. **2023**, 1-1 ○
- 27 Weighted Sum-Rate Maximization for Distributed RIS-Assisted Cell-Free Massive MIMO. **2022**, ○
- 26 Robust Beamforming Design for RIS-Aided Integrated Sensing and Communication System. **2023**, 1-17 ○
- 25 Effect of the Alumina Particle Filler Structure and Particle Size on the Dielectric Constant and Dielectric Loss in the Millimeter-Wave Band. **2023**, 8, 9379-9384 ○

24	Passive Type Polarization Independent Unit Cells for a Reconfigurable Intelligent Surfaces. 2023 , 21, 77-83	○
23	Reconfigurable Intelligent Surfaces Enabling 6G Wireless Communication Systems: Use Cases and Technical Considerations. 2022 ,	○
22	Accurate Approximation to Channel Distributions of Cascaded RIS-aided Systems with Phase Errors over Nakagami-m Channels. 2023 , 1-1	○
21	Hybrid Precoding Applied to Multi-Beam Transmitting Reconfigurable Intelligent Surfaces (T-RIS). 2023 , 12, 1162	○
20	Temporal Neural Network Framework Adaptation in Reconfigurable Intelligent Surface-Assisted Wireless Communication. 2023 , 23, 2777	○
19	DOF Augmentation via IRS for Line-of-Sight Communication. 2022 ,	○
18	An Inverted L-Shaped Multi-Layer Reconfigurable Intelligent Surface for THz Communications. 2022 ,	○
17	A 28-GHz, Multi-Beam, Decentralized Relay Array. 2023 , 1-16	○
16	Reconfigurable Intelligent Surface Aided Position and Orientation Estimation Based on Joint Beamforming With Limited Feedback. 2023 , 4, 748-767	○
15	On the Secure Performance of Intelligent Reflecting Surface-Assisted HARQ Systems. 2023 , 25, 519	○
14	Leveraging the Role of Dynamic Reconfigurable Antennas in Viewpoint of Industry 4.0 and Beyond. 2023 , 6,	○
13	A Survey on Energy Optimization Techniques in UAV-Based Cellular Networks: From Conventional to Machine Learning Approaches. 2023 , 7, 214	○
12	RIS-carried UAV communication: Current research, challenges, and future trends. 2023 ,	○
11	A varactor-based 1024-element RIS design for mm-waves. 4,	○
10	Integration of Reconfigurable Intelligent Surface and Visible Light Communication Systems for 5G and Beyond Communications. 2023 ,	○
9	Edge-Native Intelligence for 6G Communications Driven by Federated Learning: A Survey of Trends and Challenges. 2023 , 1-23	○
8	Review Paper on Hardware of Reconfigurable Intelligent Surfaces. 2023 , 11, 29614-29634	1
7	Optimization of Decode-and-Forward Relaying and RIS Aided MISO System. 2022 ,	○

- 6 Throughput and error probability improvement in downlink communication based on MIMO-NOMA using reconfigurable intelligent surface (RIS). ○
- 5 Sum-rate Maximization for RIS-assisted IoT. **2023**, ○
- 4 Sparse Channel Estimation for IRS-Assisted Communication System Based on Denoising Autoencoder. **2023**, ○
- 3 The optimal energy-efficient design of user-specific RIS-aided uplink communication system. **2023**, 102082 ○
- 2 Rate Optimization and Interference Suppression in RIS-assisted MIMO Systems. **2023**, ○
- 1 Electromagnetic Metamaterials: From Classical to Quantum. **2023**, 1, 1-33 ○