Haigun Lee

List of Publications by Year
in descending order

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111 papers	2,102 citations	304743 22 h-index	276875 41 g-index
111 all docs	111 docs citations	111 times ranked	1166 citing authors

#	Article	IF	Citations
1	Turn-to-turn contact characteristics for an equivalent circuit model of no-insulation ReBCO pancake coil. Superconductor Science and Technology, 2013, 26, 035012.	3.5	254
2	MOF-derived CoP-nitrogen-doped carbon@NiFeP nanoflakes as an efficient and durable electrocatalyst with multiple catalytically active sites for OER, HER, ORR and rechargeable zinc-air batteries. Chemical Engineering Journal, 2022, 428, 131115.	12.7	203
3	A superconducting joint for GdBa2Cu3O7âˆ'Î´-coated conductors. NPG Asia Materials, 2014, 6, e98-e98.	7.9	112
4	Design and Experiments of Novel Hybrid Type Superconducting Fault Current Limiters. IEEE Transactions on Applied Superconductivity, 2008, 18, 624-627.	1.7	96
5	Field Mapping, NMR Lineshape, and Screening Currents Induced Field Analyses for Homogeneity Improvement in LTS/HTS NMR Magnets. IEEE Transactions on Applied Superconductivity, 2008, 18, 856-859.	1.7	73
6	A Solid Nitrogen Cooled ${hbox{MgB}}_{2}$ â€œDemonstrationâ€•Coil for MRI Applications. IEEE Transactions on Applied Superconductivity, 2008, 18, 912-915.	1.7	66
7	Investigation of HTS Racetrack Coil Without Turn-to-Turn Insulation for Superconducting Rotating Machines. IEEE Transactions on Applied Superconductivity, 2012, 22, 5200604-5200604.	1.7	61
8	No-Insulation Coil Under Time-Varying Condition: Magnetic Coupling With External Coil. IEEE Transactions on Applied Superconductivity, 2013, 23, 4601705-4601705.	1.7	57
9	Analysis of a Joint Method Between Superconducting YBCO Coated Conductors. IEEE Transactions on Applied Superconductivity, 2007, 17, 3266-3269.	1.7	53
10	Metalâ€“organic-framework-derived hierarchical Co/CoP-decorated nanoporous carbon polyhedra for robust high-energy storage hybrid supercapacitors. Dalton Transactions, 2020, 49, 1157-1166.	3.3	42
11	Practical Design of a 10 MW Superconducting Wind Power Generator Considering Weight Issue. IEEE Transactions on Applied Superconductivity, 2013, 23, 5201805-5201805.	1.7	41
12	Dynamic Response of No-Insulation and Partial-Insulation Coils for HTS Wind Power Generator. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-5.	1.7	35
13	A Design Study on 40 MW Synchronous Motor With No-Insulation HTS Field Winding. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-6.	1.7	33
14	Transient characteristics of a GdBCO racetrack pancake coil without turn-to-turn insulation. Superconductor Science and Technology, 2014, 27, 015001.	3.5	31
15	Joint Characteristics of YBCO Coated Conductor by Removing a Metallic Stabilizer. IEEE Transactions on Applied Superconductivity, 2008, 18, 1220-1223.	1.7	29
16	Corrections to â€œEffects of Impregnating Materials on Thermal and Electrical Stabilities of the HTS Racetrack Pancake Coils Without Turn-to-Turn Insulationâ€•[Jun 13 7700404]. IEEE Transactions on Applied Superconductivity, 2013, 23, 9700201-9700201.	1.7	29
17	The Fundamental Characteristics of PPLP as Insulating Material for HTS DC Cable. IEEE Transactions on Applied Superconductivity, 2013, 23, 5401704-5401704.	1.7	28
18	Current Status of and Challenges for No-Insulation HTS Winding Technique. TEION KOGAKU (Journal) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.1	24

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19	Design of Damper to Protect the Field Coil of an HTS Synchronous Motor. IEEE Transactions on Applied Superconductivity, 2009, 19, 1683-1686.	1.7	23
20	Effect of Winding Tension on Electrical Behaviors of a No-Insulation ReBCO Pancake Coil. IEEE Transactions on Applied Superconductivity, 2014, 24, 1-5.	1.7	23
21	Joint Characteristics of the YBCO Coated Conductor (CC) by Chemical Etching. IEEE Transactions on Applied Superconductivity, 2009, 19, 2835-2838.	1.7	22
22	Quench Initiation and Propagation in GdBCO Racetrack Pancake Coil for Large-Scale Rotating Machines. Journal of Superconductivity and Novel Magnetism, 2012, 25, 1071-1076.	1.8	22
23	HTS Wind Power Generator: Electromagnetic Force Between No-Insulation and Insulation Coils Under Time-Varying Conditions. IEEE Transactions on Applied Superconductivity, 2014, 24, 1-5.	1.7	22
24	Quench and Recovery Characteristics of the Zr-Doped (Gd,Y) BCO Coated Conductor Pancake Coils Insulated With Copper and Kapton Tapes. IEEE Transactions on Applied Superconductivity, 2011, 21, 2415-2419.	1.7	21
25	The Effects of a Stabilizer Thickness of the YBCO Coated Conductor (CC) on the Quench/Recovery Characteristics. IEEE Transactions on Applied Superconductivity, 2010, 20, 1246-1249.	1.7	20
26	Electrical Insulation Characteristics of PPLP as a HTS DC Cable Dielectric and GFRP as Insulating Material for Terminations. IEEE Transactions on Applied Superconductivity, 2012, 22, 7700104-7700104.	1.7	19
27	Chargeâ€“Discharge and Thermalâ€“Electrical Characteristics of GdBCO Coils Wound With Various Types of Grease as an Insulation Material. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-4.	1.7	19
28	High-$T_{m c}$ Superconducting High Gradient Magnetic Separator Using Solid Nitrogen Cooling System for Purification of CMP Wastewater. IEEE Transactions on Applied Superconductivity, 2013, 23, 3700505-3700505.	1.7	18
29	Numerical Analysis on Bifurcated Current Flow in No-Insulation Magnet. IEEE Transactions on Applied Superconductivity, 2014, 24, 1-4.	1.7	18
30	Challenging endeavor to integrate gallium and carbon via direct bonding to evolve GaN on diamond architecture. Scripta Materialia, 2018, 142, 138-142.	5.2	18
31	Normal Zone Initiation and Propagation Characteristics of a Solid Nitrogen Cooled GdBCO Racetrack Pancake Coil. IEEE Transactions on Applied Superconductivity, 2012, 22, 4701704-4701704.	1.7	17
32	Investigation of thermal and electrical stabilities of a GdBCO coil using grease as an insulation material for practical superconducting applications. Review of Scientific Instruments, 2014, 85, 094701.	1.3	17
33	Analytical and experimental investigation of electrical characteristics of a metallic insulation GdBCO coil. Review of Scientific Instruments, 2016, 87, 034701.	1.3	17
34	Feasibility Study of a No-Insulation 1.5-T/600-mm All-REBCO Magnet for MRI Systems. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-4.	1.7	17
35	A study of the electromagnetic characteristics of no-insulation GdBCO racetrack coils under an external magnetic ripple field. Superconductor Science and Technology, 2016, 29, 045010.	3.5	17
36	Thermal and Electrical Stabilities of Solid Nitrogen (SN2) Cooled YBCO Coated Conductors for HTS Magnet Applications. IEEE Transactions on Applied Superconductivity, 2010, 20, 2172-2175.	1.7	15

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37	3-D Field Mapping and Active Shimming of a Screening-Current-Induced Field in an HTS Coil Using Harmonic Analysis for High-Resolution NMR Magnets. IEEE Transactions on Applied Superconductivity, 2013, 23, 4400804-4400804.	1.7	14
38	Thermal Quench Behaviors of No-Insulation Coils Wound Using GdBCO Coated Conductor Tapes With Various Lamination Materials. IEEE Transactions on Applied Superconductivity, 2014, 24, 1-5.	1.7	14
39	Study for Reducing the Screening Current-Induced Field in a 10-MHz No-Insulation Magnet Using Current Sweep Reversal Method. IEEE Transactions on Applied Superconductivity, 2014, , 1-1.	1.7	13
40	Experimental and Analytical Studies on Electromagnetic Behaviors of the GdBCO Racetrack Coils in a Time-Varying Magnetic Field. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-6.	1.7	13
41	A Study on Electrical Characteristics of Multilayered Metallic-Insulation Coils. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-6.	1.7	13
42	Evaluation of subsurface damage inherent to polished GaN substrates using depth-resolved cathodoluminescence spectroscopy. Thin Solid Films, 2018, 660, 516-520.	1.8	13
43	Design, analysis, and fabrication of salient field-pole for a 1-kW-class HTS rotating machine. Cryogenics, 2019, 97, 126-132.	1.7	13
44	Design Study on a 100-kA/20-K HTS Cable for Fusion Magnets. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-5.	1.7	12
45	A Study on Normal Zone Propagation Behavior of Partially Insulated GdBCO Coil. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-4.	1.7	12
46	Design and Analysis of Cooling Structure on Advanced Air-Core Stator for Megawatt-Class HTS Synchronous Motor. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-7.	1.7	12
47	Conduction-Cooled Brass Current Leads for a Resistive Superconducting Fault Current Limiter (SFCL) System. IEEE Transactions on Applied Superconductivity, 2007, 17, 2248-2251.	1.7	11
48	Experimental Analysis of a Splice Method Between YBCO Coated Conductors on Various Bending Diameters. IEEE Transactions on Applied Superconductivity, 2010, 20, 1577-1580.	1.7	11
49	Analysis of the Mechanical Characteristics of a 17-MW-Class High-Temperature Superconducting Synchronous Motor. Journal of Superconductivity and Novel Magnetism, 2015, 28, 671-679.	1.8	11
50	Insulation Characteristics of PPLP and Design of 250 kV Class HTS DC Cable. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-4.	1.7	11
51	A Study on Chargeâ€“Discharge Characteristics of No-Insulation GdBCO Magnets Energized via a Flux Injector. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-6.	1.7	11
52	Repetitive Over-Current Characteristics of the Joints Between the YBCO Coated Conductor. IEEE Transactions on Applied Superconductivity, 2009, 19, 2419-2422.	1.7	10
53	Experimental Study on Hysteresis of Screening-Current-Induced Field in an HTS Magnet for NMR Applications. IEEE Transactions on Applied Superconductivity, 2014, 24, 1-5.	1.7	10
54	A novel no-insulation winding technique of high temperature-superconducting racetrack coil for rotating applications: A progress report in Korea university. Review of Scientific Instruments, 2016, 87, 104704.	1.3	10

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55	Note: Progress on the use of MgB2 superconducting joint technique for the development of MgB2 magnets for magnetic resonance imaging (MRI). Review of Scientific Instruments, 2017, 88, 086105.	1.3	10
56	Quench and Recovery Characteristics of Solid Nitrogen (SN2) Cooled YBCO Coated Conductor (CC) Tapes with Different Stabilizers. Journal of Superconductivity and Novel Magnetism, 2011, 24, 1697-1706.	1.8	9
57	Characteristic Comparison for the Various Winding Methods of HTS Magnets. IEEE Transactions on Applied Superconductivity, 2012, 22, 4902907-4902907.	1.7	9
58	Properties of room-temperature ferromagnetic semiconductor in manganese-doped bilayer graphene by chemical vapor deposition. Journal of Materials Chemistry C, 2015, 3, 4235-4238.	5.5	9
59	Numerical Analysis on Characteristic Resistance of No-Insulation and Partial-Insulation NbTi Solenoids. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-5.	1.7	9
60	Fabrication and Charging Test of HTS Field Windings Using HTS Contactless Rotary Excitation Device. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-7.	1.7	9
61	Analytical Design Method of High-Tc Coated Conductor for a Resistive Superconducting Fault Current Limiter Using Finite Element Method. IEEE Transactions on Applied Superconductivity, 2010, 20, 1172-1176.	1.7	8
62	Effects of Melting Diffusion and Annealing in Oxygen on Superconducting Characteristics of GdBCO Coated Conductors: Preliminary Results. IEEE Transactions on Applied Superconductivity, 2013, 23, 6600804-6600804.	1.7	8
63	Field Mapping and Automated Shimming of an HTS Magnet by â€œInternalâ€•Active Shim Coils Located in the Bore of the Magnet. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-4.	1.7	8
64	A Study on Cooling Performances and Over-Current Behaviors of GdBCO Coils With Respect to Epoxy Impregnation Methods. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-5.	1.7	8
65	Characteristic Analysis of Various Structural Shapes of Superconducting Field Coils. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-5.	1.7	8
66	Thermal and electrical properties of thermal-grease-insulated REBCO superconducting coils with respect to winding tension. Metals and Materials International, 2017, 23, 1050-1055.	3.4	8
67	Superconducting Properties of Reacted Mono- and Multifilament MgB2 Wires With Respect to Bending Diameters Using a Custom-Made Bending Test Probe. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-6.	1.7	8
68	Investigation of multifilament MgB2 superconducting joint technique for development of MRI magnets. Review of Scientific Instruments, 2018, 89, 094701.	1.3	8
69	In vivo 3D Reconstruction of the Human Pallidothalamic and Nigrothalamic Pathways With Super-Resolution 7T MR Track Density Imaging and Fiber Tractography. Frontiers in Neuroanatomy, 2021, 15, 739576.	1.7	8
70	Stator Winding Fault Influence on the Field Coil of a 10 MW Superconducting Synchronous Generator. IEEE Transactions on Applied Superconductivity, 2013, 23, 5200104-5200104.	1.7	7
71	Feasibility Study for Elimination of the Screening Current-Induced Fields in HTS Coil. Journal of Superconductivity and Novel Magnetism, 2015, 28, 83-88.	1.8	7
72	Investigation of the Key Factors Affecting the Permanent Damage of the REBCO Coated Conductor in Overcurrent Condition. IEEE Transactions on Applied Superconductivity, 2015, 25, 1-5.	1.7	7

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73	Effects of Stabilizer Thickness of 2G HTS Wire on the Design of a 1.5-MW-Class HTS Synchronous Machine. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.7	7
74	Study on Thermal-Quench Behaviors of GdBCO Coils Wound With Silicon Grease as an Insulation Material. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.7	7
75	The Barrier Effect on Breakdown for Design of 154 kV Class HTS Transformer. IEEE Transactions on Applied Superconductivity, 2011, 21, 1434-1437.	1.7	6
76	The Effects of External Pressure on the Thermal and Electrical Properties of Stacked GdBCO Coated Conductor Tapes. IEEE Transactions on Applied Superconductivity, 2012, 22, 4701804-4701804.	1.7	6
77	Observation of ferromagnetic semiconductor behavior in manganese-oxide doped graphene. AIP Advances, 2014, 4, 087120.	1.3	6
78	Characteristic Resistance of No-Insulation and Partial-Insulation Coils With Nonuniform Current Distribution. IEEE Transactions on Applied Superconductivity, 2014, 24, 1-5.	1.7	6
79	A Study on the Electrical Characteristics of Metal-Clad GdBCO Coils. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-5.	1.7	6
80	Comparison Study on Harmonic Loss of MW-Class Wind Generators With HTS Field Winding. IEEE Transactions on Applied Superconductivity, 2014, 24, 1-5.	1.7	5
81	Investigation on quench initiation and propagation characteristics of GdBCO coil co-wound with a stainless steel tape as turn-to-turn metallic insulation. Review of Scientific Instruments, 2016, 87, 114701.	1.3	5
82	Cooling Performance and Thermal Characteristics of No-Insulation GdBCO Magnet Cooled by a Mixed Cryogen Cooling System. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.7	5
83	Test and Analysis of Laboratory-Scale D-Shaped Co-Wound No-Insulation HTS Single Pancake Coil for TF Coil Application. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-5.	1.7	5
84	Two-Stage Cryocooling Design for Hybrid Superconducting Fault Current Limiter. IEEE Transactions on Applied Superconductivity, 2010, 20, 2047-2050.	1.7	4
85	A Research About Bending Strain Effect on Splice Characteristics in ${m YBa}_{2}{m Cu}_{3}{m O}_{7-{m x}}$ Coated Conductors Under Various Pressures in Splicing. IEEE Transactions on Applied Superconductivity, 2011, 21, 3001-3004.	1.7	4
86	A Study on the Loss in a Superconducting Magnet by the Control Current in a Hybrid Electro-Magnetic Suspension System. IEEE Transactions on Applied Superconductivity, 2012, 22, 3600105-3600105.	1.7	4
87	The Effect of Bobbin Material on the Thermal Stability of a Conduction-Cooled HTS Racetrack Coil. IEEE Transactions on Applied Superconductivity, 2014, 24, 1-5.	1.7	4
88	Comparative Study of Magnetic Characteristics of Air-Core and Iron-Core High-Temperature Superconducting Quadrupole Magnets. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-5.	1.7	4
89	Preliminary Conceptual Design Study on HTS Toroidal Field Coil for Compact High Magnetic Field Tokamak. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-7.	1.7	4
90	Future Prospects of Positron Emission Tomographyâ€“Magnetic Resonance Imaging Hybrid Systems and Applications in Psychiatric Disorders. Pharmaceuticals, 2022, 15, 583.	3.8	4

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91	Fault Current Limitation Characteristics of Bi-2212 Bulk Coil With Different Types of Shunt Coils. IEEE Transactions on Applied Superconductivity, 2007, 17, 1879-1882.	1.7	3
92	Fabrication of a high performance acoustic emission (AE) sensor to monitor and diagnose disturbances in HTS tapes and magnet systems. Metals and Materials International, 2010, 16, 109-113.	3.4	3
93	Over-Current Characteristics Influenced by Ag Stabilizer Thickness in a GdBCO Coated Conductor (CC). IEEE Transactions on Applied Superconductivity, 2011, 21, 3029-3032.	1.7	3
94	Insulation Characteristics of Cryogens for HTS Power Apparatus. IEEE Transactions on Applied Superconductivity, 2012, 22, 7700904-7700904.	1.7	3
95	A Study on Recovery Characteristics of Joined Tapes From the View of Thermal and Electrical Variation for Superconducting Magnets. IEEE Transactions on Applied Superconductivity, 2012, 22, 4703505-4703505.	1.7	3
96	Thermal and Electrical Stabilities of YBCO Coated Conductor Tapes in a Solid Argon-Liquid Nitrogen Mixed Cooling System. Journal of Superconductivity and Novel Magnetism, 2012, 25, 1431-1440.	1.8	3
97	The Effects of Liquid Cryogen on the Thermal/Electrical Characteristics of a GdBCO Coil in a Mixed Cryogen Cooling System. IEEE Transactions on Applied Superconductivity, 2013, 23, 4700405-4700405.	1.7	3
98	Fabrication and testing of high performance acoustic emission sensor with Ta-Doped lead zirconate titanate. Journal of Electroceramics, 2015, 35, 53-58.	2.0	3
99	Current-Lead Design for Variable Electric Current in HTS Power Applications. IEEE Transactions on Applied Superconductivity, 2010, 20, 1725-1728.	1.7	2
100	Processing Parameters that Affect the Tolerable Bending Diameter of Reacted MgB2 Wires. Metals and Materials International, 2019, 25, 1467-1476.	3.4	2
101	Current-Lead Design for Cryocooled HTS Fault Current Limiters. IEEE Transactions on Applied Superconductivity, 2007, 17, 2244-2247.	1.7	1
102	Theoretical Prediction of the Quench Behavior of a SFCL Module Having a BSCCO-2212 Bulk Coil and a Shunt Coil. IEEE Transactions on Applied Superconductivity, 2007, 17, 1871-1874.	1.7	1
103	Thermal Analysis of PCS for an HTS Pancake Coil in Persistent Current Mode. IEEE Transactions on Applied Superconductivity, 2010, 20, 1009-1012.	1.7	1
104	The Effect of Operating Temperature on Transport AC Loss According to an YBCO Superconducting Tape Array Geometry. IEEE Transactions on Applied Superconductivity, 2011, 21, 3329-3333.	1.7	1
105	Purification of Chemical Mechanical Polishing Wastewater via Superconducting High Gradient Magnetic Separation System with Optimal Coagulation Process. IEEE Transactions on Applied Superconductivity, 2014, , 1-1.	1.7	1
106	Mechanical Bending Characteristics of HTS DC Cable. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-4.	1.7	1
107	Magnetic Field Stability Analysis on No-Insulation and Turn-to-Turn Soldered HTS Magnets Under Sinusoidal Noise Operation. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.7	1
108	Oxygen out-diffusion in partially melted YBa2Cu3Oyâˆ’0.325Ag superconductor at reduced oxygen partial pressure. Metals and Materials International, 2008, 14, 673-678.	3.4	1

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109	Oxygen out-diffusion in partially melted YBa2Cu3Oyâˆ’0.325Ag superconductor at reduced oxygen partial pressure. Metals and Materials International, 2008, 14, 673-678.	3.4	0
110	Optimal Arrangement of Current Leads to Minimize Electromagnetic Force. IEEE Transactions on Applied Superconductivity, 2010, 20, 1741-1746.	1.7	0
111	Micro-architecture embedding ultra-thin interlayer to bond diamond and silicon via direct fusion. Applied Physics Letters, 2018, 112, 211601.	3.3	0