



ASC 2020 Abstract Submission Categories

Main Categories	Sub-Cat#	Sub-Category Title	
Electronics			
E-11: Fabrication & packaging	11a	Fabrication & packaging: Advanced/novel	
	11b	Fabrication & packaging: HTS	
	11c	Fabrication & packaging: LTS	
	11d	Fabrication & packaging: Packaging and multi-chip modules	
	11e	Fabrication & packaging: Wires and tapes	
E-12: System integration, measurement and standards	12a	System integration etc.: Input/output and data links	
	12b	System integration etc.: Metrology and standards	
	12c	System integration etc.: Testing and instrumentation	
E-13: Digital logic and memory	13a	Digital logic & memory: Architectures	
	13b	Digital logic & memory: EDA tools	
	13c	Digital logic & memory: Flux trapping	
	13d	Digital logic & memory: Logic	
	13e	Digital logic & memory: Memory	
E-15: Microwave devices, components and detectors (mixers)	15a	Microwave: Active devices	
	15b	Microwave: Cavities and applications	
	15c	Microwave: Devices and components	
	15d	Microwave: Filters and antennas	
	15e	Microwave: Non-equilibrium detectors and mixers	
	15f	Microwave: Quantum information processing	
	15g	Microwave: Various magnetic applications	
E-16: SQUIDs	16a	SQUIDs: Applications	
	16b	SQUIDs: Devices and circuits	
E-17: Quantum information	17a	Quantum information: Computing and engineering	
	17b	Quantum information: Processing	
E-18: Novel electronics: mesoscopics, topological circuits, metamaterials	18a	Novel electronics	
E-19: Nanowire single-photon detectors	19a	Nanowire single-photon detectors: Applications	
	19b	Nanowire single-photon detectors: Device physics and theory	
	19c	Nanowire single-photon detectors: Fabrication and materials	
	19d	Nanowire single-photon detectors: Measurement and readout	
E-20: Superconducting detectors	20a	SC Detectors: Analysis and calibration	
	20b	SC Detectors: Fabrication	
	20c	SC Detectors: Detector physics	
	20d	SC Detectors: Enabling technologies	
	20e	SC Detectors: Instruments and applications	
	20f	SC Detectors: Kinetic inductance detectors and components	
	20g	SC Detectors: Readout techniques	
	20g	SC Detectors: Readout techniques	
Large Scale: Large Systems			
L-31: Large detector arrays (non-electronic)	31a	Large detector arrays (non-electronic)	
L-35: Superconducting RF	35a	Superconducting RF cavities	
	35b	Superconducting RF systems	
	71b	Superconducting RF materials: MgB ₂	
	71c	Superconducting RF materials: Nb	
	71d	Superconducting RF materials: Nb ₃ Sn	
	71e	Superconducting RF materials: Other materials	
L-36: Levitation, transportation, and propulsion	36a	Magnetic levitation and bearings	
	36b	Propulsion applications	
	36c	Motors, generators, and rotating machines for propulsion	
L-37: Magnetic separation and other applications	37a	Magnetic separation	
	37b	Induction heating	
	37c	Various magnetic applications	
	37d	Novel large scale devices	
L-38: Cryogenics for superconducting devices and system integration	38a	Cryogenics for superconducting devices	
	38b	Cryogen free magnets and systems	
Large Scale: Superconducting Magnets			
L-40-41: Accelerator, wiggler, undulator, special magnets	40a	Accelerator magnet: Design and analysis techniques	
	40b	Accelerator magnet: Systems	
	40c	Accelerator magnets: AC loss and magnetization	
	40d	Accelerator magnets: HTS	
	40e	Accelerator magnets: LTS	
	40f	Accelerator magnets: Quench detection and protection	
	40g	Accelerator magnets: Testing and measurement techniques	
	40h	Accelerator magnets: Other	
	40i	Detector and corrector magnets	
	40j	Other superconducting accelerator magnet technologies	
	41a	Wigglers, undulators, special magnets:	
	41b	Wigglers, undulators, special magnets: Quench detection and protection	
	41d	Wigglers, undulators, special magnets: Testing and measurement techniques	
	L-42: Fusion: Magnets, cables and conductors	42a	Conductors and cables for fusion: HTS
		42b	Conductors and cables for fusion: LTS
		42c	Fusion systems and system testing/operation
42d		Magnets for fusion system: HTS	
42e		Magnets for fusion system: LTS	
48a		Cables and CICC: Measurements and test facilities	

L-43: Very high field and NMR magnets	43a	NMR magnets: LTS	
	43b	NMR magnets: HTS/hybrid	
	43c	Hybrid magnets: LTS/HTS	
	44d	Hybrid magnets: Superconducting/resistive	
	43d	High field HTS magnets	
	43e	Joint technology	
	90b	HTS test coils	
	90c	HTS test coils: Measurement techniques	
	90d	LTS test coils	
	90e	LTS test coils: Measurement techniques	
	95a	Test facilities	
	L-44: Magnets for medical systems	44a	MRI
		44b	Synchrotrons and cyclotrons
		44c	Other medical applications
L-46: HTS magnets	46a	HTS magnets (other)	
	46b	No-insulation/metal-insulation coils	
	49b	Screening current modeling	
	49c	Numerical modeling: HTS magnets	
	90c	HTS test coils: Measurement techniques	
L-47: Magnet stability, magnetization effects, AC losses and protection	47a	Stability, magnetization, AC losses, and protection	
	47b	Stability, magnetization, AC losses, and protection: HTS magnets	
	47c	Stability, magnetization, AC losses, and protection: Numerical modeling	
	47d	Magnetization and AC loss: Measurements	
	48d	Magnetization and AC loss: Cables	
	40c	Accelerator magnets: AC loss and magnetization	
	L-48/54: Cables (HTS, LTS), CICC, current leads, transmission	48a	Cables and CICC: Measurements and test facilities
48b		Cables and CICC: Non-fusion, non-transmission	
48c		Current leads	
48d		Magnetization and AC loss: Cables	
54a		Cables and CICC: Transmission/power	
54b		Current Leads: Transmission/power	
42a		Conductors and cables for fusion: HTS	
42b		Conductors and cables for fusion: LTS	
L-49: Magnet design and analysis techniques		49a	Magnet design and analysis techniques
		49b	Screening current modeling
	49c	Numerical modeling: HTS magnets	
	49d	Numerical modeling: LTS magnets	
	49e	Numerical modeling: Superconductors and cables	
Large Scale: Superconducting Electric Power			
L-50: Grid study with superconducting devices	50a	Grid study: Fault current limiters	
	50b	Grid study: with HTS superconducting devices	
	50c	Grid study: with LTS superconducting devices	
	50d	Superconducting power devices for power grid	
	L-52: Motors, Generators, rotating machines, flux-pumps	52a	Flux pumps
52b		Flux pumps: Measurements and experimental techniques	
52c		Motors, generators, and rotating machines: AC loss	
52d		Motors, generators, and rotating machines: HTS bulk	
52e		Motors, generators, and rotating machines: HTS non-bulk	
52f		Motors, generators, and rotating machines: Measurements	
52g		Motors, generators, and rotating machines: Wind applications	
L-55-56: Transformers and fault current limiters		55a	Transformers (non-HTS)
	55b	Transformers with HTS	
	56a	Fault current limiters (non-HTS)	
	56b	Fault current limiters with HTS	
	56c	FCL measurements and experimental techniques	
L-57: Energy storage	57a	Energy storage (non-HTS)	
	57b	Energy storage with HTS	
L-59: AC loss in electrical power devices	59a	AC loss: HTS power cables	
	59b	AC loss: Measurements and experimental techniques	
	59c	AC loss: Numerical modeling of superconductors	
	59d	AC loss: Superconducting electrical power devices	
	59e	AC loss: Transmission and distribution cables and links	
	59f	Stability, magnetization effects, and AC losses	
Large Scale: Measurement and Testing			
L-90: Measurement and experimental techniques	90a	Accelerator magnet testing and measurement techniques	
	90b	HTS test coils	
	90c	HTS test coils: Measurement techniques	
	90d	LTS test coils	
	90e	LTS test coils: Measurement techniques	
	90f	Magnetic measurements	
	47d	Magnetization and AC loss: Measurements	
	56c	FCL Measurements and experimental techniques	
	59b	AC loss: Measurements and experimental techniques	
	L-95: Test facilities and instrumentation	95a	Test facilities
95b		Instrumentation and power supplies for superconducting devices	
Materials			
M-60: Nb-Ti, A15 and other LTS conductors	60a	LTS: Critical current and flux pinning	
	60b	LTS: Critical temperature and critical fields	
	60c	LTS: General superconductor materials science	
	60d	LTS: Magnetization and time-dependent losses	
	60e	LTS: Mechanical properties, strain dependence	
	60f	LTS: Processing and conductor characterization	
	60g	LTS: Procurement and meeting future requirements	
	60h	LTS: Other properties and general materials science	
	M-62: MgB ₂ wires and tapes	62a	MgB ₂ : Critical current and flux pinning
		62b	MgB ₂ : Critical temperature and critical fields
		62c	MgB ₂ : General superconductor materials science
62d		MgB ₂ : Magnetization and time-dependent losses	
62e		MgB ₂ : Mechanical properties, strain dependence	

	62f	MgB ₂ : Processing and conductor characterization
	62g	MgB ₂ : Other properties and general materials science
M-64: 2212 and 2223 wires and tapes	64a	2212 & 2223: Critical current and flux pinning
	64b	2212 & 2223: Critical temperature and critical fields
	64c	2212 & 2223: General superconductor materials science
	64d	2212 & 2223: Magnetization and time-dependent losses
	64e	2212 & 2223: Mechanical properties, strain dependence
	64f	2212 & 2223: Processing and conductor characterization
	64g	2212 & 2223: Other properties and general materials science
M-66: Coated conductors (REBCO)	66a	CC: Critical current and flux pinning
	66b	CC: Critical temperature and critical fields
	66c	CC: Development towards high field magnets
	66d	CC: General superconductor materials science
	66e	CC: Industrial development
	66f	CC: Magnetization and time-dependent losses
	66g	CC: Mechanical properties, strain dependence
	66h	CC: Related materials (buffers, templates, etc.)
	66i	CC: Synthesis and characterization
	66j	CC: Other properties and general materials science
M-68: Bulk conductors	68a	Bulk: Critical current and flux pinning
	68b	Bulk: Critical temperature and critical fields
	68c	Bulk: General superconductor materials science
	68d	Bulk: HTS
	68e	Bulk: LTS and MgB ₂
	68f	Bulk: Magnetization and time-dependent losses
	68g	Bulk: Mechanical properties, strain dependence
	68h	Bulk: New and emerging materials including Fe-chalcogenides
	68i	Bulk: Pnictides and related materials
	68j	Bulk: Other properties and general materials science
M-69: Other wires and tapes	69a	Other: Critical current and flux pinning
	69b	Other: Critical temperature and critical fields
	69c	Other: General superconductor materials science
	69d	Other: Magnetization and time-dependent losses
	69e	Other: Mechanical properties, strain dependence
	69f	Other Wires and Tapes: Other properties and general materials science
M-70: General superconductor materials science	70a	General materials R&D
	43e	Joint technology
M-71: SRF materials, metals and simple compounds	71a	Metals and simple compounds
	71b	Superconducting RF materials: MgB ₂
	71c	Superconducting RF materials: Nb
	71d	Superconducting RF materials: Nb ₃ Sn
	71e	Superconducting RF materials: Other materials
M-72: Cuprates and related materials (buffers, templates, etc.)	72a	Cuprates: Coated Conductors (non-REBCO)
	68d	Bulk: HTS
	72b	Cuprates: Artificial structures, thin films, and multilayers
	72c	Cuprates: Critical current and flux pinning
	72e	Cuprates: Critical temperature and critical fields
	72f	Cuprates: Magnetization and time-dependent losses
	72g	Cuprates: Mechanical properties, strain dependence
	72h	Cuprates: Synthesis and characterization
	72i	Cuprates: Wires and tapes
	72j	Cuprates: Other properties and general materials science
M-73: Pnictides and related materials	73a	Pnictides: Bulk conductors
	73b	Pnictides: Coated conductors, artificial structures, thin films, and multilayers
	73c	Pnictides: Critical current and flux pinning
	73d	Pnictides: Critical temperature and critical fields
	73e	Pnictides: Magnetization and time-dependent losses
	73f	Pnictides: Mechanical properties, strain dependence
	73g	Pnictides: Synthesis and characterization
	73h	Pnictides: Wires and tapes
	73i	Pnictides: Other properties and general materials science
M-74: Fe-chalcogenides and other emerging materials	74a	FeSe/Other: Coated conductors, artificial structures, thin films, and multilayers
	74b	FeSe/Other: Bulk conductors
	74c	FeSe/Other: Critical current and flux pinning
	74d	FeSe/Other: Critical temperature and critical fields
	74e	FeSe/Other: Magnetization and time-dependent losses
	74f	FeSe/Other: Mechanical properties, strain dependence
	74g	FeSe/Other: Synthesis and characterization
	74h	FeSe/Other: Wires and tapes
	74i	FeSe/Other: Other properties and general materials science
M-75: Artificial structures, thin films, and multilayers	72b	Cuprates: Artificial structures, thin films, and multilayers
	73b	Pnictides: Coated conductors, artificial structures, thin films, and multilayers
	74a	FeSe/Other: Coated conductors, artificial structures, thin films, and multilayers
	75a	Layers etc.: Nb-Ti, Nb ₃ Sn, and other LTS
	75b	Layers etc.: MgB ₂
	75c	Layers etc.: Critical current and flux pinning
	75d	Layers etc.: Magnetization and time-dependent losses
	75e	Layers etc.: Mechanical properties, strain dependence
	75f	Layers etc.: Critical temperature and critical fields
	75g	Layers etc.: Other properties and general materials science
M-77: Insulation and dielectrics	77a	Insulation and dielectrics
M-78: Ancillary materials for superconducting applications	78a	Ancillary materials for superconducting applications

Mapping to legacy IEEE categories:		
Properties Important for Applications		
M-80: Critical current and flux pinning	60a	LTS: Critical current and flux pinning
	62a	MgB ₂ : Critical current and flux pinning
	64a	2212 & 2223: Critical current and flux pinning

	66a	CC: Critical current and flux pinning
	68a	Bulk: Critical current and flux pinning
	69a	Other: Critical current and flux pinning
	72c	Cuprates: Critical current and flux pinning
	73c	Pnictides: Critical current and flux pinning
	74c	FeSe/Other: Critical current and flux pinning
	75c	Layers etc.: Critical current and flux pinning
M-82: Magnetization and time-dependent losses	60d	LTS: Magnetization and time-dependent losses
	62d	MgB ₂ : Magnetization and time-dependent losses
	66f	CC: Magnetization and time-dependent losses
	68f	Bulk: Magnetization and time-dependent losses
	69d	Other: Magnetization and time-dependent losses
	72f	Cuprates: Magnetization and time-dependent losses
	73e	Pnictides: Magnetization and time-dependent losses
	74e	FeSe/Other: Magnetization and time-dependent losses
	75d	Layers etc.: Magnetization and time-dependent losses
M-84: Mechanical properties, strain dependence	60e	LTS: Mechanical properties, strain dependence
	62e	MgB ₂ : Mechanical properties, strain dependence
	64e	2212 & 2223: Mechanical properties, strain dependence
	66g	CC: Mechanical properties, strain dependence
	68g	Bulk: Mechanical properties, strain dependence
	69e	Other: Mechanical properties, strain dependence
	72g	Cuprates: Mechanical properties, strain dependence
	73f	Pnictides: Mechanical properties, strain dependence
	74f	FeSe/Other: Mechanical properties, strain dependence
	75e	Layers etc.: Mechanical properties, strain dependence
M-86: Critical temperature and critical fields	60b	LTS: Critical temperature and critical fields
	62b	MgB ₂ : Critical temperature and critical fields
	64b	2212 & 2223: Critical temperature and critical fields
	66b	CC: Critical temperature and critical fields
	68b	Bulk: Critical temperature and critical fields
	69b	Other: Critical temperature and critical fields
	72e	Cuprates: Critical temperature and critical fields
	73d	Pnictides: Critical temperature and critical fields
	74d	FeSe/Other: Critical temperature and critical fields
	75f	Layers etc.: Critical temperature and critical fields
M-88: Other properties	60h	LTS: Other properties and general materials science
	62g	MgB ₂ : Other properties and general materials science
	64g	2212 & 2223: Other properties and general materials science
	66j	CC: Other properties and general materials science
	68j	Bulk: Other properties and general materials science
	69f	Other Wires and Tapes: Other properties and general materials science
	72j	Cuprates: Other properties and general materials science
	73i	Pnictides: Other properties and general materials science
	74j	FeSe/Other: Other properties and general materials science
	75g	Layers etc.: Other properties and general materials science