



ASC
24

SALT LAKE CITY

SEPTEMBER 1 - 6

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SALT PALACE CONVENTION CENTER

ASC 2024 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
E-17: Quantum systems	16b	SQUIDs: Devices and circuits
	17a	Quantum systems: Computation
E-18: Novel electronics: mesoscopics, topological circuits, metamaterials	17b	Quantum systems: Sensing and networking
	17c	Quantum systems: Control and readout electronics
	17d	Quantum systems: Fabrication, packaging, and scalable infrastructure
	17e	Quantum systems: Hybrid or novel quantum systems
	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
	21a	AI/ML as a tool for Electronics
E-21: AI/ML as a tool for Electronics		
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 (non-materials)
	35b	Superconducting RF systems
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
	38a	Cryogenics for superconducting devices and system integration
L-38: Cryogenics for superconducting devices and system integration		
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
	41c	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	
	43a	NMR magnets: LTS	
L-43: Very high field and NMR magnets	43b	NMR magnets: HTS/hybrid	
	43c	Hybrid magnets: LTS/HTS	
	43d	HTS magnets (very high field)	
	43e	Hybrid magnets: Superconducting/resistive	
	43f	Joint technology (non-materials): Implementation	
	44a	MRI	
L-44: Magnets for medical systems	44b	Synchrotrons and cyclotrons	
	44c	Other medical applications	
L-46: HTS magnets	46a	HTS magnets (non-very high field)	
	46b	No-insulation/metal-insulation coils	
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	
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	
	49a	Magnet design and analysis techniques	
	49b	Screening current modeling	
L-49: Magnet design and analysis techniques	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	
L-57: Energy storage	56c	FCL measurements and experimental techniques	
	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	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	
L-95: Test facilities and instrumentation	95a	Test facilities	
	95b	Instrumentation and power supplies for superconducting devices	
Large Scale: Other			
L-96: AI/ML as a tool for Large Scale	96a	AI/ML as a tool for Large Scale	
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 superconductors	68a
68b		Bulk superconductors: Critical temperature and critical fields
68c		Bulk superconductors: General superconductor materials science
68d		Bulk superconductors - HTS: processing and characterization
68e		Bulk superconductors - LTS and MgB ₂ : Processing and characterization
68f		Bulk superconductors: Magnetization and time-dependent losses
68g		Bulk superconductors: Mechanical properties, strain dependence
68h		Bulk superconductors: New and emerging materials including Fe-based
68i		Bulk superconductors: Pnictides and related materials
68j		Bulk superconductors: 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
	70b	Joint technology (materials): Processing and characterization
M-71: SRF materials	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
	71f	Cuprates: Coated Conductors (non-REBCO)
M-72: Cuprates and related materials (buffers, templates, etc.)	72a	Cuprates: Artificial structures, thin films, and multilayers
	72b	Cuprates: Critical current and flux pinning
	72c	Cuprates: Critical temperature and critical fields
	72d	Cuprates: Magnetization and time-dependent losses
	72e	Cuprates: Mechanical properties, strain dependence
	72f	Cuprates: Synthesis and characterization
	72g	Cuprates: Wires and tapes
	72h	Cuprates: Other properties and general materials science
	72i	Pnictides: Bulk conductors
	72j	Pnictides: Coated conductors, artificial structures, thin films, and multilayers
	72k	Pnictides: Critical current and flux pinning
M-73: Pnictides and related materials	73a	Pnictides: Critical temperature and critical fields
	73b	Pnictides: Magnetization and time-dependent losses
	73c	Pnictides: Mechanical properties, strain dependence
	73d	Pnictides: Synthesis and characterization
	73e	Pnictides: Wires and tapes
	73f	Pnictides: Other properties and general materials science
	73g	FeSe/Other: Coated conductors, artificial structures, thin films, and multilayers
	73h	FeSe/Other: Bulk conductors
	73i	FeSe/Other: Critical current and flux pinning
	73j	FeSe/Other: Critical temperature and critical fields
	M-74: Fe-chalcogenides and other emerging materials	74a
74b		FeSe/Other: Mechanical properties, strain dependence
74c		FeSe/Other: Synthesis and characterization
74d		FeSe/Other: Wires and tapes
74e		FeSe/Other: Other properties and general materials science
74f		Thin films and multilayers: Nb-Ti, Nb ₃ Sn, and other LTS
74g		Thin films and multilayers: MgB ₂
74h		Thin films and multilayers: Critical current and flux pinning
74i		Thin films and multilayers: Magnetization and time-dependent losses
74j		Thin films and multilayers: Mechanical properties, strain dependence
M-75: Artificial structures, thin films, and multilayers		75a
	75b	Thin films and multilayers: Other properties and general materials science
	75c	Insulation and dielectrics
	75d	Ancillary materials for superconducting applications
	75e	Materials for superconducting quantum systems
	75f	AI/ML as a tool for Materials
M-77: Insulation and dielectrics	77a	Insulation and dielectrics
M-78: Ancillary materials for superconducting applications	78a	Ancillary materials for superconducting applications
	78b	Materials for superconducting quantum systems
M-79: AI/ML as a tool for Materials	79a	AI/ML as a tool for Materials