

Program

Talk durations: Keynote 40 min (30–35 min talk + 5–10 min Q&A); Invited 30 min (25 min talk + 5 min Q&A); Contributed oral 20 min (15 min talk + 5 min Q&A).

Venue for all oral sessions: **Lecture Hall, 1st Floor, Building 8, Institute of Oceanology, Chinese Academy of Sciences (Guzhenkou Campus)** — 中国科学院海洋研究所 (古镇口园区) 8 号楼1 楼 报告厅, 青岛市黄岛区海军路 88 号.

Sunday, June 28, 2026

Time	Activity
14:00 – 17:30	Registration
17:30 – 20:30	Welcome Reception (嘉年厅 Jia-nian Hall)

Monday, June 29, 2026

Time	Speaker	Title / Activity
08:30 – 09:00	Registration	
09:00 – 09:15	Opening Ceremony	
Session 1: Molecular Biology and Synthetic Biology Chair: Christopher Lefèvre, Wei Lin		
09:15 – 09:55	Dirk Schüler	How bacteria shape magnetic organelles: Insights into magnetosome morphogenesis in <i>Magnetospirillum gryphiswaldense</i>
09:55 – 10:15	Jakob J. Beierl	Purification and analysis of premagnetic magnetosome vesicles
10:15 – 10:35	Marta Masó-Martínez	Lipidomic profiling of biomineralization in <i>Magnetospirillum gryphiswaldense</i> MSR-1
10:35 – 11:10	Group Photo and Coffee Break	
11:10 – 11:40	Azuma Taoka	Functional analyses of the evolutionarily conserved magnetosome surface protein MamA
11:40 – 12:00	Yuanyuan Pan	The roles of MamJ for dynamic property of MamK cytoskeleton
12:00 – 12:20	Daisy Sun	Co-localization and interaction of MamB, MamL, and MamI in the mammalian cell
12:20 – 14:00	Lunch	

Time	Speaker	Title / Activity
Session 2: Biodiversity, Ecology, and Evolution Chair: Dirk Schüler, Azuma Taoka		
14:00 – 14:40	Christopher Lefèvre	Magnetosymbiosis
14:40 – 15:00	Emanuel Petre	Distribution of magnetotactic bacteria along redox gradients in the central Baltic sea
15:00 – 15:20	Juan Wan	Stratified distribution of magnetotactic bacteria near simulated oxic-anoxic transition zone
15:20 – 15:40	Runjia Ji	GdbMTB: a curated genomic database of magnetotactic bacteria
15:40 – 16:00 Coffee Break		
16:00 – 16:20	Elsa Turrini	Giant multicellular magnetotactic prokaryotes in marine sediments
16:20 – 16:40	Jiangxue Shi	Enrichment effect and potential ecological functions of multicellular magnetotactic prokaryotes in the seagrass rhizosphere
16:40 – 17:00	Qingxian Su	Beyond magnetosomes: ubiquitous and diverse intracellular inclusions highlight the role of magnetotactic bacteria in biogeochemical cycling
17:00 – 17:20	Peiyu Liu	Extensive horizontal gene transfer drives microbial adaptation and diversification in Kermadec Trench hadal microbiomes
17:30 – 20:00 Dinner		

Tuesday, June 30, 2026

Time	Speaker	Title / Activity
Session 3: Magnetotaxis, Behavior, and Motility Chair: Alfred Fernandez-Castané, Juan Wan		
09:00 – 09:30	Stefan Klumpp	Modeling magnetotactic motility
09:30 – 09:50	Beile Gao	The architecture, assembly, and evolution of a complex flagellar motor
09:50 – 10:10	Danny Yosmar Villanueva Alvaro	A comparative experimental–simulation motility study of <i>Magnetospirillum gryphiswaldense</i> under rotating magnetic fields
10:10 – 10:30 Coffee Break		
10:30 – 11:00	Jiandong Feng	Quantum chemical imaging for visualizing magnetic evolution in a single live magnetotactic bacteria
11:00 – 11:20	Haitao Chen	Biological functions and evolutionary significance of the blue-light-sensing LOV protein in magnetotactic bacteria
11:20 – 11:40	Yuzong Chen	Short-duration spaceflight activities of magnetotactic bacteria species in sealed soil mini-ecosystems
11:40 – 12:00	Zhe Wang	Effects of simulated microgravity on magnetosome biomineralization in <i>Magnetospirillum gryphiswaldense</i> Strain MSR-1
12:00 – 14:00 Lunch		
Session 4: Environmental and Industrial Applications Chair: Jiandong Feng, Stefan Klumpp		
14:00 – 14:30	Alfred Fernandez-Castané	Exploring the biofilm lifestyle of <i>Magnetospirillum gryphiswaldense</i>
14:30 – 14:50	Beatriz Aparecida Vessalli	Advanced magnetic hybrid nanomaterials based on nanobiomagnetite for efficient water and wastewater treatment
14:50 – 15:10	Paula Martin De Prado	From biodiesel waste to magnetosomes: valorising crude glycerol for the sustainable cultivation of <i>Magnetospirillum gryphiswaldense</i> MSR-1
15:10 – 15:30	George Mbella Teke	Environmental assessment of magnetosome bioproduction
15:30 – 15:50	Jiacheng Yu	High-performance FeSiAl SMCs for MHz applications enabled by insulating coatings of bioinspired NiZn ferrite nanoparticles
16:00 – 18:00 Poster Session		
18:00 – 20:00 Dinner		

Wednesday, July 1, 2026

Time	Speaker	Title / Activity
Session 5: Biomedical and Biotechnological Applications Chair: Munitta Muthana, Junfeng Wang		
09:00 – 09:30	Junfeng Wang	Research progress on magnetotactic bacteria under high magnetic field
09:30 – 09:50	Jiawei Liu	Biomimetic single-domain magnetic nanochains surpassing magnetotactic bacteria in hyperthermia efficiency
09:50 – 10:10	Changyou Chen	Construction of magnetotactic bacterial microrobots using tumoral nanovesicles for tumor targeted treatment
10:10 – 10:30	Alicia Gascón Gubieda	Determining the mechanisms of action of magnetosomes in magnetic hyperthermia cancer treatment
10:30 – 10:50 Coffee Break		
10:50 – 11:20	Munitta Muthana	Living microrobots: magnetotactic bacteria for targeting triple-negative breast cancer
11:20 – 11:40	Kun Ma	Construction of high magnetic moment magnetotactic bacterial robots and study on drug delivery to deep solid tumors under multi-magnetic field coupled driving
11:40 – 12:00	Zhiduo Sun	Bio-mineralization of ferritin and mild magnetic hyperthermia therapy for bladder cancer
12:00 – 14:00 Lunch		
Afternoon: Excursion — Refer to the General Information		
18:00 Conference Dinner Banquet — TBD		

Thursday, July 2, 2026

Time	Speaker	Title / Activity
Session 6: Geobiology and Biogeomagnetism Chair: Mattieu Amor, Jinhua Li		
09:00 – 09:30	Mattieu Amor	Elucidating the emergence of magnetotactic bacteria: can we reconcile Earth and life sciences?
09:30 – 09:50	Melissa Garry	Molybdenum drives nitrogen metabolism and magnetite biomineralization in magnetotactic bacteria
09:50 – 10:10	Vera Soltes	Spatial and temporal distribution of magnetotactic bacteria within the gulf coast of the United States and Mexico
10:10 – 10:30	Pengfei Xue	Deciphering magnetofossil coercivity components: new proxies for paleoredox reconstruction
10:30 – 10:50 Coffee Break		
10:50 – 11:05	Yan Liu	Quantitative identification of magnetofossils and its application in Late Quaternary Southern Ocean paleoenvironment reconstructions
11:05 – 11:25	Zhaowen Pei	Micromagnetic simulations of magnetofossil chains: towards benchmark FORC data for deep learning-based magnetic inversion
11:25 – 11:45	Kuang He	Differential remanence recording efficiency of detrital and biogenic magnetite: evidence from synthetic and marine sediment redeposition experiments
11:45 – 12:00	Jie Ren	Calcium ions mediate hypomagnetic field effects on mammalian neural stem cells
12:00 – 12:30	Can Xie	The mysteries of protein magnetism and intermolecular electron transfer in the MagR/Cry complex
12:30 – 12:40 Closing Session		
12:40 – 14:40 Lunch		