

Research Group of Biological Effects of Geomagnetic Field Variations Institute of Geology and Geophysics, Chinese Academy of Sciences



Magnetic coils and magnetically shielded room

The research group has focused on how and to what extent the geomagnetic field variations influence the biosphere, and successfully initiated and developed the interdisciplinary research of biogeomagnetism in China in the past two decades. Their

synthesis of tumor-targeted magnetoferritin nanoparticles for biomedical applications. promoted the deep integration of geophysics and life sciences.

Outstanding contributors of this research group

Pan Yongxin

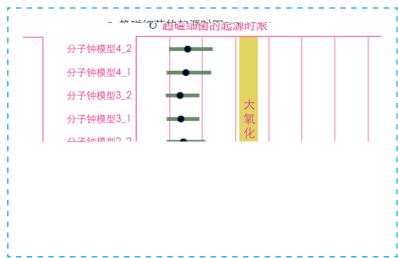
He proposed and established the co-evolution system of the geomagnetic field and the biosphere and expanded the applications of magnetoferritin nanoparticles in medicine and geoscience.

Tian Lanxiang

She presented a series of new evidence of bats using magnetic cues for compass orientation and demonstrated the molecular mechanism by which long-term hypomagnetic field exposure impairs adult hippocampal neurogenesis and cognition in mammals.

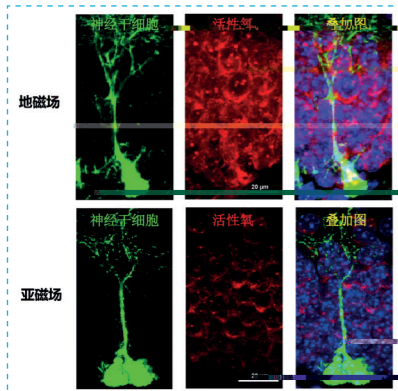
Lin Wei

He expanded the taxonomic and phylogenetic diversity of magnetotactic bacteria, proposed a novel model for the evolutionary origin of microbial magnetoreception, and demonstrated that magnetotactic bacteria have evolved since at least three billion years ago in the Archean Eon.



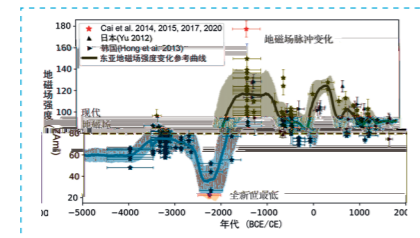
32-34

Magnetotaxis evolved in bacteria during the Archean

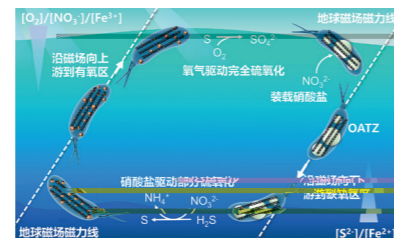


(ROS)

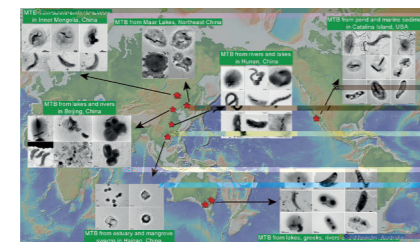
Magnetic fields modulating the endogenous ROS levels



Establishing the first archeointensity reference curve of Eastern Asia



Establishing the new model of MTB driving biogeochemical elemental cycling



Global diversity and biogeography of magnetotactic bacteria



The experimental platform of biomimetically synthesized magnetoferritin nanoparticles



Research group photo

地磁场变化的生物效应研究集体

推荐单位:

研究集体主要科技贡献:



Pan Yongxin



Tian Lanxiang



Lin Wei

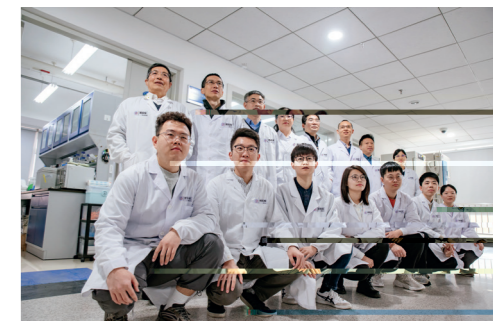
研究集体突出贡献者

研究集体突出贡献者

研究集体主要完成者



The group members discussing the data



The group members and students in laboratory