

Asian Regional Symposium on Biomineral and Hard Tissues, Beijing, China, 1998

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昨年10月5日から7日まで、北京で生鉱物と硬組織に関するアジア地域シンポジウムが開催された。会議は、中国科学アカデミーの主催で北京市の脊椎動物古生物学、古人類学研究所で3日間に渡り行われ、日本側から学生を含めて15人、中国側から30人以上の参加者があった。

初日の午前中には、特別講演2題が行われ、中国側からの多数の要人の参加を見た。当日午後からは本格的な発表と討論が行われ、この日は7件の報告があった。それらは、サンゴ2件、軟体動物5件、魚類1件の生鉱物についての電顕、X線回折、生化学、組織学的な方法を用いた多岐に渡る分析結果の報告であった。これらの報告のうち、5件は化石資料に関するものであった。続く6日は、午前中に8件の発表があった。これらは主として長鼻類と霊長類及び魚類の象牙質とエナメル質の微細構造の観察や元素分析を通じた石灰化機構に関する報告であった。午後は、周口店への小旅行が組まれていた。最後の7日には11件の報告があった。午前中には4件の卵殻に関する報告があった。これらは、恐竜の卵殻に関する2件の報告と、ダチョウとニワトリに関する、アミノ酸配列分析を含む生化学的分析やX線回折、SEM、微量成分分析等の分析結果であり、活発な討論が行われた。午後にかけては、堆積物中のmicrobial biominerals、鉄鉱床の成因などについて電顕や元素分析などのデータを基にした議論が行われた。その後、主催者のZhao Zikui氏と小林氏を中心としてclosing sessionが行われ、3日間に渡る会議の幕が閉じられた。

この会議は、Biomineralization研究の進歩と日中の研究者の間の交流にとってだけでなく、近い将来に日本での開催が予定されているBiomineralization国際会議に向けた第一歩として、その意義は大きかったといえよう。

Open ceremony and oral session: Monday A. M., Oct 5th, 1998

Executive chairman: Ye Jie (IVPP, CAS, Beijing)

1. Welcome speech by Director of IVPP, Qiu Zhuding
2. Speech by Organizer, Zhao Zikui.
3. Masae Omori:

On the evolution of Biomineralization during the Late Proterozoic and the Early Cambrian

4. Wang Hongzhen and Chen Jianqiang:

Biocrystallization and Microskeletal Structures of Rugose Corals

5. Li Hengde:

On the Biomineralisation and Biomaterials

~ Lunch ~

Oral session: Monday P. M., Oct 5th, 1998

Executive chairmen:

Tetsuro Samata (Azabu University, Japan)

Li Zishun (Institute of Geology, Chinese Academy of Geological Sciences, Beijing)

1. Yeishin Isa:

Ultrastructure on the Mineralization of Skeleton in Scleractinians

2. T. Samata, M. Ogura, N. Hayashi, C. Horita and S. Akera:

Preservation of the Matrix proteins in the shell of Cretaceous *Inoceramus*

3. Li Haibo, Feng Qinglin, Cui Fuzhai and Li Hengde:

Investigation of the Mineral Phase Structures and the Preferred Crystal Orientations in the Shells of *Mytilus edulis*

4. Katsutomo Mano:

The Structures of the Hinge of Fossil Taxodont Species, Bivalvia

5. Feng Qingling, Cui Fuzhai and T. N. Kim:

Crystallographic Orientation of Flat Tablets in

Iwao Kobayashi, Ichiro Sasagawa and Tetsuro Samata

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Nacre of the Bivalvia Shells

6. Iwao Kobayashi:

Shell Structure of Fresh-water Bivalvia from the View-point of Phylogeny and Function

7. Zhu Min:

A Histological Study of Dermal Skeleton in *Psarolepis*, with General Remarks on the Biology of Cosmine

Oral session: Tuesday A. M., Oct 6th, 1998

Executive chairmen:

Ichiro Sasagawa (Depart. of Anatomy, School of Dentistry at Niigata, Japan)

Feng Qingling (Depart. of Materials Science and Engineering, Tsinghua University, Beijing)

1. Feng Weimin and Sun Weiguo:

Biom mineralization Characters of Early Molluscs and their Evolutionary Significance

2. Zhu Youhai:

Gypsum and its Mechanism from Lime Mud, Reef Limestone and Beachrock in the Ryukyu Islands, Japan

3. Ichiro Sasagawa and Junji Akai:

Fine Structure of the Mineralization during Odontogenesis in Lower Vertebrates

4. Cui Fuzhai, Su Xiawei and Feng Qingling:

Hierarchical Structure of Ivory: from Nanometer to Centimeter

5. Hidetoshi Kamiya, Kimiko Kato and Iwao Kobayashi:

Comparison of Enamel Texture of Molars in Advanced Proboscideans (Elephants)

6. Zhao Lingxia, Ouyang Lian and Lu Qingwu:

Preliminary SEM Observation about Enamel Structure in *Lufengpithecus lufengensis*: Incremental Markings and Prism Patterns

7. Zhang Wending and Zhao Zikui:

The Enamel Ultrastructure in Pongo of Pleistocene

8. Ge Yao and Wang Qin:

The Anti-caries and Remineralization Effects of Slow-release Fluoride Tablet *in Vivo*

~ Lunch ~

PM. Visiting Zhoukaudian Locality

Oral session: Wednesday A. M., Oct 7th, 1998

Executive chairmen:

Hidetoshi Kamiya (Kyoto University, Japan)

Song Tianrui (Institute of Geology, Chinese Academy of Geological Sciences, Beijing)

1. Masashi Takahashi and Kan Kobayashi:

Histological Studies on the Minerals Composing Human Dental Calculi

2. Song Tianrui:

Geological Events Promoting Biomineralization as an Example of the Enlightenment on Pathology of Human Stone Disease

3. Li Haibo, Feng Qingling, Cui Fuzhai and Li Hengde:

Microstructural Investigation of Ostrich Eggshell

4. Y. Kubota, T. Samata, T. Takizawa and C. Tachi:

Biochemical Study on the Eggshell Matrix Protein in Domestic Fowl (*Gallus gallus* var domesticus)

5. Zhao Hong:

Restudy of the Histostructure and Formation of the Eggshell, Faveoolithidae, a Dinosaur Oofamily.

6. Zhao Zikui:

Normal and Pathologic Dinosaur Eggshells from Nanxiong Basin

7. Yan Baorui, Zhang Huining, Wu Bihao and Zhu Youhai:

Microbial Mineralization of Polymetallic Nodules and Sediments in the Eastern Pacific

8. Dai Yongding, Zhu Jingquan, Wang Yao and Shen Jiyong:

Microbial Biomineralization in Xuanlong Iron Ore Deposit

~ Lunch ~

9. Junji Akai, Kurumi Akai, Makoto Ito and Ichiro Sasagawa:

Biologically Induced Iron Ore Gunma Iron Mine and Some Similar Ore, Japan

10. Peng Xianzhi, Jia Rongfen, Dai Shunying and Li Rongsen:

Characteristics of Magnetic Bacteria and Magnetosomes in Chinese Loess

11. Wang Zhongcheng:

Sedimentation of Early Cambrian Stratiform Barite and Witherite Deposits in South China —Productivity of Paleo-marine Environment

12. Closing Session

Free discussion Executive Chairman.

Zhao Zikui (IVPP, Chinese Acad. Sci.)

Iwao Kobayashi (Niigata Univ.)

13. Closing remarks

Zhao Zikui