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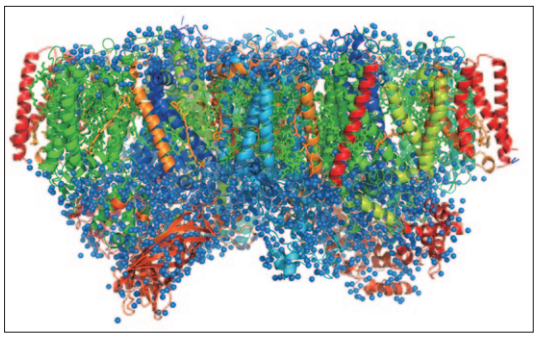
Contents

News

Professor Jian-Ren Shen's research clarifying the mechanism governing plant photosynthesis is chosen as one of the runners-up for 'Breakthrough of the Year' by AAAS Science for 2011.

Research on photosynthesis by Jian-Ren Shen of the Division of Bioscience and colleagues from Osaka City University published in Nature was selected by AAAS Science as one of the runners-up for'Breakthroughs of the Year' for 2011.


PSII whole structure

In the paper entitled, "Crystal structure of oxygen-evolving photosystem II at a resolution of 1.9A", the researchers clarified the reaction mechanism of 'water splitting' and formation of 'O-O bonds' when plants absorb sunlight, water and, carbon dioxide for their growth.

These findings may lead the realization of high efficiency artificial photosynthesis systems to resolve global energy and environmental problems.

"These results were the culmination of 21 years of my research," says Shen. "I am extremely happy for this recognition and hope that it will shed light on the importance of this research to a wider audience. I am grateful to my collaborators and students, without whom this research would not have been possible."

Reference:

1. Breakthrough of the year 2011: "Plant Life's Boxy Heart", 334, 1630, Science, 2011.
2. Yasufumi Umena, Keisuke Kawakami, Jian-Ren Shen, and Nobuo Kamiya, Crystal structure of oxygen-evolving photosystem II at a resolution of 1.9A, Nature 473, 55, 2011.

News

International symposium on photosynthesis to be held at Okayama University

Structure and Dynamics of Photosynthetic Systems, 22–23 October 2012

Okayama University is organizing an international symposium entitled "Structure and Dynamics of Photosynthetic Systems" from 22–23 October 2012, in Okayama. This symposium will focus on the structure, assembly, and dynamics of photosynthetic protein complexes including photosystem I, photosystem II, light-harvesting complexes, and related proteins, as well as their responses to various environmental stresses.

The basis of our knowledge on these topics has been garnered by the recent crystallographic analyses of Photosystem I and II super-complexes from cyanobacterial and chloroplast thylakoids. Importantly, this research area is now expanding beyond the basic science to a wide range of applications for innovative technologies, in particular to concepts to solve global environmental and energy problems.

The organizers have invited numerous internationally recognized scientists from all around the world as well as from Japan to discuss the current status and future perspectives of photosynthesis. We believe that this symposium will provide a fruitful occasion for scientists working in this field, in particular for young researchers, to ascertain new information, communicate directly with each other, and to feel the dynamic progress of photosynthesis research.

We cordially invite the international community of scientists to attend this international symposium and join in the exciting discussions during the invited lectures and poster session.

Date of the symposium: October 22 (Monday)-23 (Tuesday), 2012
Venue: Okayama University, the 50th Anniversary Hall, Tsushima-naka, Kita-ku, Okayama city, Okayama, Japan (access map). Both the oral and poster sessions will be held in the same building.
No registration fee is required.

Invited speakers (confirmed):

E.J. Boekema (Univ. Groningen, The Netherlands)
G. Brudvig (Yale Univ., USA)
G. Garab (Hungarian Academy of Science, Hungary)
M. Li (Chinese Academy of Sciences, China)
J. Messinger (Umeå Univ., Sweden)
N. Nelson (Tel Aviv Univ., Israel)
P. Nixon (Imperial College, UK)
K.K. Niyogi (UC Berkeley, USA)
J.D. Rochaix (Univ. Geneva, Switzerland)
F.A. Wollman (CNRS, France)
L.-X. Zhang (Chinese Academy of Sciences, China)
M. Ikeuchi (Univ. Tokyo, Japan
W. Sakamoto (Okayama Univ., Japan)
J.-R. Shen (Okayama Univ., Japan)
Y. Takahashi (Okayama Univ., Japan)
A. Tanaka (Hokkaido Univ., Japan)
T. Noguchi (Nagoya Univ., Japan)
Y. Yamamoto (Okayama Univ., Japan
H. Wada (Univ. Tokyo, Japan)

REGISTRATION

Deadline for registration, participation in the reception, and abstract submission: September 1, 2012
http://www.okayama-u.ac.jp/en/tp/cooperation/inter_sympo.html

Registration Site

• I will attend the symposium.
• I will present a poster.

The opening reception of the symposium will be held on 22 October, from 18:00-20:00 at Okayama University South Facility for Student Welfare.

The fees are as follows.
Researchers : 4,000 Japanese Yen
Students: 2,000 Japanese Yen

ABSTRACTS

We invite you to the poster session to present your results.
The abstracts of all the invited speakers and posters will be included in a Symposium Abstract booklet. Please send the abstract (size A4, one page; downloadable form) to J.-R. Shen of the organizing committee.

"Solar Energy and Photosynthesis"
On October 21 (Sunday), public lectures on "Solar Energy and Photosynthesis" will be held at Okayama University. These lectures are open to the public, and the lecturers will highlight the general aspects of photosynthesis, as well as the recent progress of photosynthesis research.

Date of the public lectures: October 21 (Sunday) , 2012, 14:00-16:30
The venue: Okayama University, the 50th Anniversary Hall, Tsushima-naka, Kita-ku, Okayama city, Okayama, Japan (access map).
Lecture 1 : Prof. N. Nelson (Tel Aviv Univ., Israel) (Title to be announced)
Lecture 2 : Prof. J.-R. Shen (Okayama Univ., Japan) (Title to be announced)

【Organizing committee of the Okayama University International Symposium】
S. Yamamoto (Vice President, Okayama University)
S. Takahashi (Dean of Faculty of Science, Okayama University)
J.-R. Shen (Professor, Okayama University)
Y. Takahashi (Professor, Okayama University)
Y. Yamamoto (Professor, Okayama University)
W. Sakamoto (Professor, Okayama University)
M. Nishimura (Research associate, Okayama University)

Enquiries
J.-R. Shen: shen@cc.okayama-u.ac.jp
Y. Takahashi: taka@cc.okayama-u.ac.jp
Y. Yamamoto: yasusiya@cc.okayama-u.ac.jp

News

Start-up conference held to launch tri-nation 'Campus Asia'

At Okayama University we are delighted to join forces with Jilin University in China and Sungkyunkwan University in South Korea to launch Campus Asia, a three-way cooperative to help develop a globally capable workforce. The cooperative was launched on March 3 with a start-up conference at a hotel in Okayama City.

President Kiyoshi Morita addresses the audience at the commemorative ceremony.

The three universities have come together to participate in the Program for Core Human Resources Development: For the Achievement of Common Good and Re-evaluation of Classical Culture in East Asia. The program has been selected by the Ministry of Education, Culture, Sport, Science, and Technology for its Re-Inventing Japan Project 2011 (type A 'Campus Asia').


President Kim Jun Young speaks about his enthusiasm for the program at the commemorative ceremony.

The conference was attended by approximately 100 people. These included the presidents, vice presidents, and various faculty members of the three universities, as well as representatives from the local economic community, local government, and other universities whose projects were accepted for the ministry initiative.

In a speech at the conference Kiyoshi Morita, president of Okayama University, said that the program was a means by which we could "overcome the differences in values and cultures between the three participating countries and aim for shared goals." It was, he said, "the beginning of a journey for Okayama University towards genuine internationalization."


Vice-president Wu Zhen Wu makes a speech to everyone involved in the program.

Kim Jun Young, president of Sungkyunkwan University, and Wu Zhen Wu, vice president of Jilin University, also spoke of their enthusiasm for the project.

The program is managed by Professor Masahiro Taguchi of the Okayama University Graduate School of Humanities and Social Sciences. He explained that the program would involve faculty from each participating university conducting

lectures at schools and workshops for the other two universities. The aim is to bring students from all three institutions together in the same place. Vice president Masaru Araki, who serves as concept supervisor, gave a keynote address. Seeking to promote the benefits of the program inside and outside the university, Professor Araki opined that there is a need for "unique education methods that are easily acceptable to East Asians." The program would, he said, "foster a deep sense of teamwork among the participants."

A plenary session and sub-committee meetings were held with faculty members from the three universities in attendance. The eager exchange of opinions helped boost morale among the already highly motivated participants.

Feature

President Kiyoshi Morita's vision for Okayama University: The global research and education hub at the heart of Japan.


PSII whole structure

Kiyoshi Morita was appointed the president of Okayama University in April 2011. "After graduating from Okayama University Medical School I trained to be an anesthetist, "says Morita. "Later in my career I was the director of the Okayama University Hospital. My experience to date as a medical doctor, a research scientist, and six years as hospital director are proving to be important assets in managing the university."

Okayama University is one of the largest comprehensive universities in Japan with 1,300 faculty and 14,000 students. "Our roots go back to the Medical Training Place sponsored by the Lord of Okayama and established in 1870," explains Morita. "Now, we offer courses in areas ranging from medicine and pharmacy to humanities and physical sciences. We are a true comprehensive university located in the heart of Japan approximately 3 hours west of Tokyo by Shinkansen."

President Morita has a clear vision for the future of Okayama University. "I would like to create a globally accessible research and educational hub based on a 'university town'," says Morita. "Realizing this will necessitate strong collaboration between the university, the city of Okayama, and surrounding regions."

"I want Okayama University to be a hub for knowledge-creation by being the center for medical services, nurturing skilled manpower and contributing to the prosperity of Okayama and of course global society," says Morita.

President Morita has launched a wide range of initiatives to achieve these goals. These include cultivating independently thinking, highly motivated individuals based on interdisciplinary research and education programs offered by Okayama University's 'integrated graduate school system', and the promotion of translational medical research at the University Hospital.

"I want to take advantage of the location, history and natural beauty of Okayama and its surroundings to create a truly international university," says Morita.

Okayama University is located in one of the safest regions in Japan, without any significant natural disasters in living memory. Also the city of Okayama is famous for the beautiful surroundings such as the cultural heritage gardens of Korakuen, mild climate, ease of access, and low cost of living.

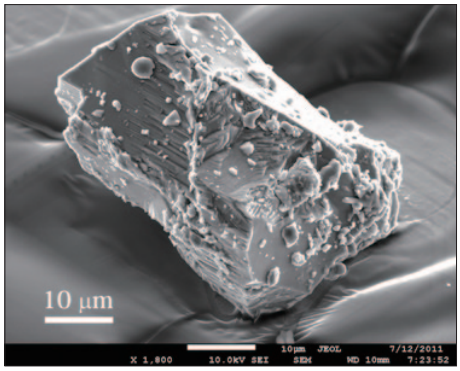
"I look forward to welcoming students, researchers, and educators to Okayama University—the global research and education hub at the heart of Japan."

Further information

Okayama University website: http://www.okayama-u.ac.jp/index_e.html
Location: http://www.okayama-u.ac.jp/en/tp/access/location.html

Research Highlights

Evolving planets get a bumpy ride



Scanning electron microscope image of a particle from the Itokawa asteroid brought to Earth by Japan's Hayabusa space probe (Copyright Eizo Nakamura 2012).

Asteroids are considered to comprise intermediate products in the evolution of solar bodies. The Japan Aerospace Exploration Agency (JAXA) sent a probe to investigate the near-Earth asteroid 25143 Itokawa with the aim of learning more about the evolution of the solar system. Eizo Nakamura and colleagues at Okayama University and the Japan Aerospace Exploration Agency (JAXA) have now studied samples retrieved by the probe — the first reported analysis of grains taken directly from a solar body in space.

Using scanning electron microscopy, the researchers identified craters 100-200 nm in size as well as particles adhered to the asteroid surface. They suggest that a combination of disaggregation, cratering, melting, adhesion, agglutination, and implantation/sputtering affect the asteroid surface as a result of bombardment by submicrometre sized particles in space.

Among the other features observed in the grains a type of feldspar occurrence would have formed during slow cooling from temperatures of 860 °C. These temperatures and cooling dynamics could not have been achieved in a rock with a radius of only 300m. As a result it is likely that the asteroid Itokawa originated from a larger asteroid.

"We suggest that the chemistry and textures of Itokawa's surface reflect long-term bombardment of equilibrated chondritic material, at scales of 10–9 to 104 meters," conclude the authors. They add that impact processes in general play a central role in the evolution of planetary bodies.

Reference:

- Authors: Eizo Nakamura1, Akio Makishima1, Takuya Moriguti1, Katsura Kobayashi1, Ryoji Tanaka1, Tak Kunihiro1, Tatsuki Tsujimori1, Chie Sakaguchi1, Hiroshi Kitagawa1, Tsutomu Ota1, Yusuke Yachi1, Toru Yada2, Masanao Abe2, Akio Fujimura2, Munetaka Ueno2, Toshifumi Mukai2, Makoto Yoshikawa2, and Jun'ichiro Kawaguchi2
- Title of original paper: Space environment of an asteroid preserved on micrograins returned by the Hayabusa spacecraft
- Journal, volume, pages and year: Proceedings of the National Academy of Science 109, E624-E629 (2012).
- Digital Object Identifier (DOI): 10.1073/pnas.1116236109
- Affiliations:

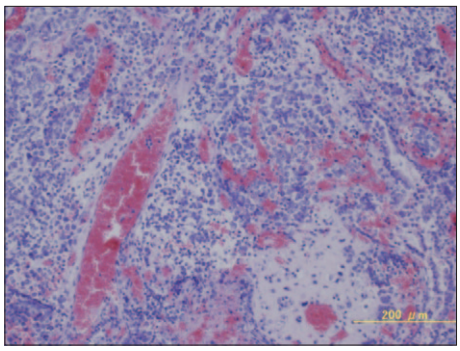
1 The Pheasant Memorial Laboratory for Geochemistry and Cosmochemistry, Institute for Study of the Earth's Interior, Okayama University, Misasa, Tottori 682-0193, Japan.

2 Japan Aerospace Exploration Agency, Yoshinodai 3-1-1, Chuo, Sagamihara, Kanagawa 252-5210, Japan.

Research Highlights

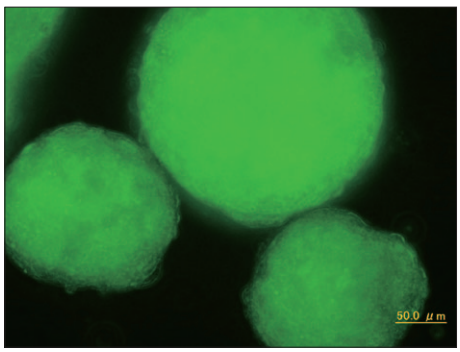
Stemming the spread of cancer

Cancer stem cells (CSCs) have been proposed as an explanation for the spread of cancer. These cells are tumorigenic and have the capacity of both self-renewal and differentiation into a range of various cell types. In this concept, malignant tumors provide heterogeneous aspects derived from CSCs as well as normal stem cells provide tissue specific phenotype in response to their microenvironment.



Angiogenesis

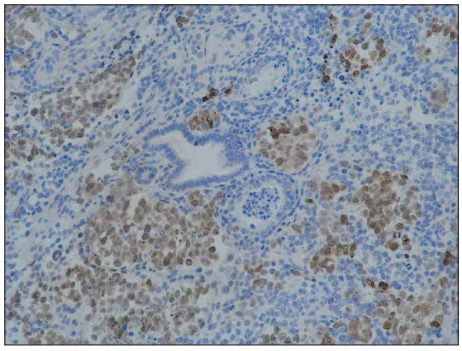
Researchers have now demonstrated in vitro the development of CSCs from a type of normal stem cell exposed to their hypothetical microenvironment of a tumor. The results are the work of a group of scientists led by Masaharu Seno, a professor of Okayama University, with his collaborators in China and the US.



Spheroid GFP

The researchers cultured mouse induced pluripotent stem (miPS) cells in a conditioned medium obtained from a number of mouse cancer cell lines. Finally, a population of stem cells was kept undifferentiated and proliferating while other stem cells differentiated into specialized cells, which were incapable of proliferation any more.

Since the survived miPS cells treated with the conditioned medium were found malignantly tumorigenic in vivo, they concluded that the cells could be defined as CSCs . "The model of CSCs and the procedure of their establishment will help study the genetic alterations and the secreted factors in the tumor microenvironment which convert miPS cells to CSCs," explain the authors. The work should help breakthrough towards the development of new therapies to combat cancer.


Immunostain

Reference:

- Authors: Ling Chen[1,2,3], Tomonari Kasai1, Yueguang Li[4], Yuh Sugii[1], Guoliang Jin[1], Masashi Okada[1], Arun Vaidyanath[1], Akifumi Mizutani[1], Ayano Satoh[5], Takayuki Kudoh[1], Mary J. C. Hendrix[6], David S. Salomon[7], Li Fu[8], Masaharu Seno[1]
- Title of original paper: A model of cancer stem cells derived from mouse induced pluripotent stem cells
- Journal, volume, pages and year: PLoS One 7, e33544 (2012).
- Digital Object Identifier (DOI): 10.1371/journal.pone.0033544
- Affiliations:

1 Department of Medical and Bioengineering Science, Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan.

2 Japan Society for the Promotion of Science, Tokyo, Japan.

3 Department of Pathology, Tianjin Central Hospital of Gynecology Obstetrics, Tianjin, People's Republic of China.

4 Department of General Surgery, Tianjin 4th Centre Hospital, Tianjin, People's Republic of China.

5 Multidisciplinary Division, Okayama University, Okayama, Japan.

6 Children's Memorial Research Center, Feinberg School of Medicine, Northwestern University, Chicago, Illinois, United States of America.

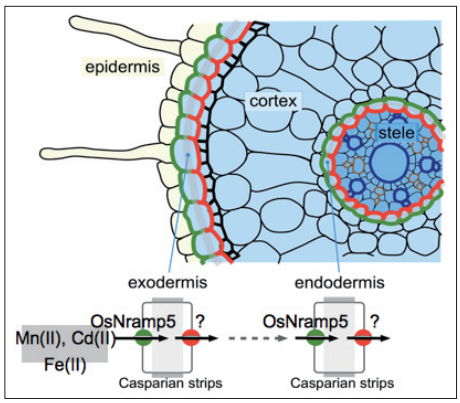
7 Laboratory of Mammary Biology and Tumorigenesis, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, Maryland, United States of America.

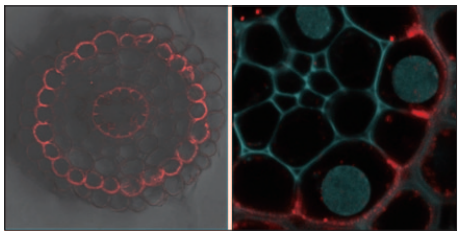
8 State Key Laboratory of Breast Cancer Research, Department of Breast Cancer Pathology and Research Laboratory, Cancer Hospital of Tianjin Medical University, Tianjin, People's Republic of China

Research Highlights

Identification of a rice transporter for manganese and cadmium uptake

Rice (Oryza sativa) is an important dietary source of cadmium and can accumulate very high levels of manganese without toxic effects. However so far there has been little understanding of the uptake and transport mechanisms for these minerals. In depth studies by Jian Feng Ma and colleagues at Okayama University in Japan have revealed how OsNramp5, a member of the natural resistance macrophage protein (Nramp) family, enables uptake of specific minerals in rice.





Cellular and subcellular localization of OsNramp5

The researchers performed a number of investigations to compare wild-type rice plants with plants that had an insertion in the gene (knockout line) from the Rice Mutant Database. The mutant line had a grain yield of only 11% that of the wild-type rice. High-manganese concentrations conditions partially restored the growth of Nramp5 knockout mutant rice. The impaired growth was attributed to lack of manganese uptake in mutant rice.

Cadmium is not essential for plant growth so it is likely to use other metal ion transporters rather than having a specifically evolved uptake route. The results reported by Ma and colleagues suggest that OsNramp5 provides a route for cadmium uptake from the soil as well. As the authors point out, "manipulating the selectivity of this transporter will be important for regulating Cd transfer from the soil to the grain in the future."

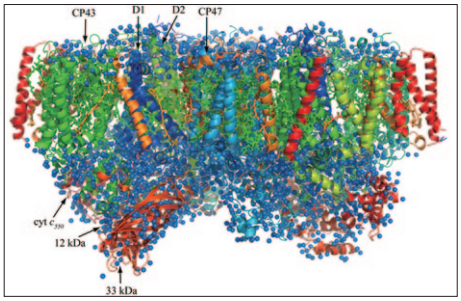
Reference:

- Authors: Akimasa Sasaki, Naoki Yamaji, Kengo Yokosho, and Jian Feng Ma
- Title of original paper: Nramp5 Is a major transporter responsible for manganese and cadmium uptake in rice
- Journal, volume, pages and year: The Plant Cell 24, 2155-2167 (2012).
- Digital Object Identifier (DOI): 10.1105/tpc.112.096925
- Affiliations: Institute of Plant Science and Resources, Okayama University, Kurashiki 710-0046, Japan

Research Highlights

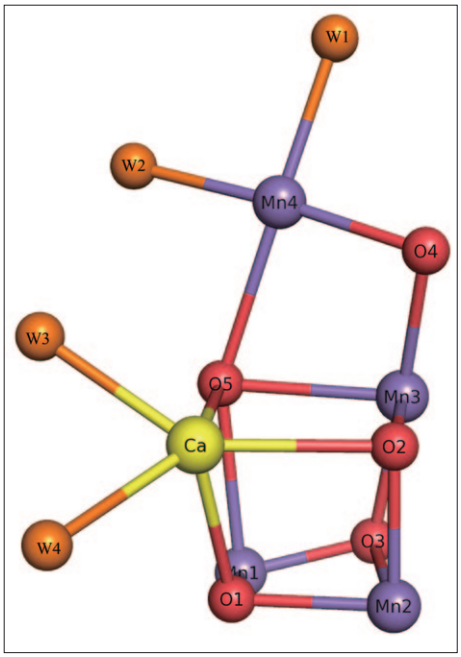
Water splitting: Ultrahigh resolution data reveals reaction mechanisms

Oxygenic photosynthetic organisms utilize energy from the sun to split water into protons, electrons and oxygen — products vital to life on earth. The process takes place through light-induced electron transfer reactions in a membrane protein complex photosystem II, but so far the resolution of structural studies on the protein complex has been too limited to ascertain the mechanism of these reactions in detail.



Overall structure of photosystem II dimer

Now Jian-Ren Shen at Okayama University in collaboration with researchers at Osaka City University in Japan has solved the structure of the photosystem II complex at an unprecedented resolution. They improved the quality of the photosystem II crystals significantly, and obtained X-ray diffraction data with a resolution of 1.9 Å.



Structure of the chair-shaped oxygen-evolving complex

Their studies revealed the detailed structures of amino acid residues and a number of cofactors involved in light absorption, energy transfer, and electron transfer reactions in this protein complex. The most significant finding of their work is elucidation of the detailed structure of the Mn4CaO5 cluster, which catalyses the light-induced water-splitting reaction. The cluster is shaped like a distorted chair and the distances between atoms in the structure provide insights into the role of oxygen and nearby water molecules in dioxygen formation. As they pointed out, "This provides a basis for unravelling the mechanism of water splitting and O–O bond formation, one of nature's most fascinating and important reactions." Their studies are considered extremely helpful for artificial photosynthesis that aims to derive clean energy from the sun light efficiently, which may provide an ultimate solution for the energy and environmental problems that we face.

Reference:

- Authors: Yasufumi Umena1, Keisuke Kawakami2, Jian-Ren Shen2 and Nobuo Kamiya1
- Title of original paper: Crystal structure of oxygen-evolving photosystem II at a resolution of 1.9 Å
- Journal, volume, pages and year: Nature 473, 55-61 (2011).
- Digital Object Identifier (DOI): 10.1038/nature09913
- Affiliations:

1 Department of Chemistry, Graduate School of Science, Osaka City University, 3-3-138 Sugimoto, Sumiyoshi, Osaka 558-8585, Japan.

2 Division of Bioscience, Graduate School of Natural Science and Technology/Faculty of Science; Okayama University, Okayama 700-8530, Japan.

Intellectual Property and Enterprise

BIOX: Amorphous iron oxide nanostructures of bacterial origin for applications including anodes for Li ion batteries.

Professor Jun Takada, Graduate School of Natural Science and Technology

"Iron-oxidizing bacteria" produce extracellular, uniquely-shaped microsheaths or fibrous bundle nanostructures comprising mainly of iron oxides—known as Biogenous iron oxides (BIOX)—ubiquitously in natural hydrosphere at ambient temperature (Fig. 1).

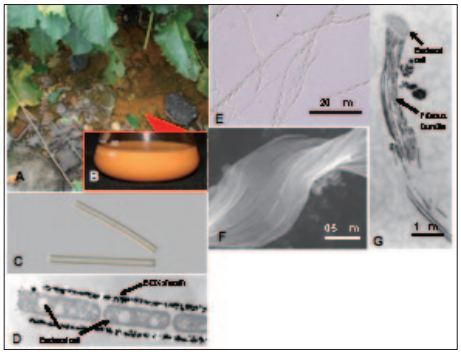


Fig. 1.
(A) Ocherous deposits ubiquitously seen in water pools.
(B) BIOX deposits collected from a water pool.
(C) BIOX sheaths in the deposit.
(D) A longitudinal section of a BIOX sheath enveloping bacterial cells.
(E) Chain-like BIOX
(F) A twisting BIOX bundle comprised of fibrous materials.
(G) Fibrous bundles connecting to a bacterial cell.

Although BIOX has been generally recognized as waste, we have studied its properties for as yet unknown potential industrial applications. Our careful and focused studies revealed BIOX matrix to have the following physical properties: (i) an amorphous state; (ii) consist of organic/inorganic hybrid of nanoparticles of approximately 3 nm diameter; (iii) the nanoparticles are composed of many elements, C, O, Fe, Si and P; (iv) inorganic elements are linked via oxygen (Fig. 2).

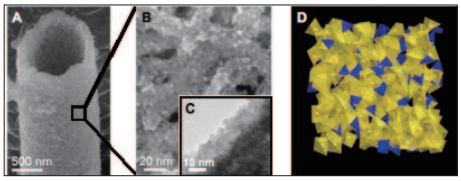


Fig. 2.
(A) A BIOX sheath covered with a network surface.
(B) Enlarged fibrous matrix of a sheath BIOX with fine surface particles.
(C) Primary particles (ca. 3nm diameter) comprising the matrix.
(D) A computer graphic model showing allocation of FeO6 (yellow) and SiO4 (blue) units in the sheath matrix.

Importantly, BIOX has a far superior potential (for example a large capacity) as an anode material of Li-ion batteries compared to conventional carbon anodes. In addition, BIOX exhibits an amazing, wide range of functions compared with other materials currently: (i) higher catalytic potential; (ii) higher affinity to human cells; and (iii) brighter color property (Fig. 3). All these characters are superior to those of artificially synthesized iron oxides. We are confident that the eco-friendly, nontoxic, and low-cost BIOX will be a next-generation functional material.

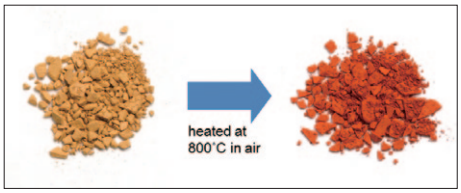


Fig. 3. Bright yellowish red color of heat-treated BIOX which is expected to yield unprecedented brilliant pigmentation of porcelains.

Detailed studies of an isolated strain of one type of the bacteria led us to elucidate the incipient mechanism of BIOX formation. Our experiments showed that extracellular secretion of bacterial polymers triggers deposition and binding of aquatic inorganics such as Fe, Si, and P, which results in

the unique organic/inorganic hybrid. Further analysis is in progress for a greater insight into how the mechanism and mode of chemical linkages in the BIOX matrix contribute to the aforementioned functions.

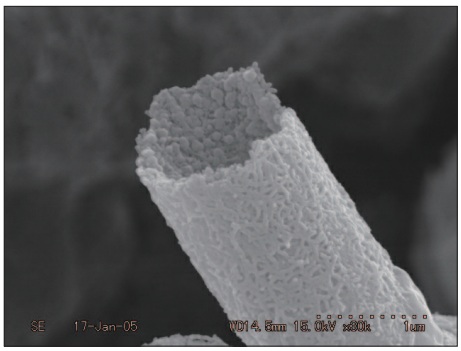


Fig. 4. Tubular iron oxide produced by bacteria (diameter is 1/1000 mm)

Technical publications:

H. Hashimoto et al, "Characteristics of hollow microtubes consisting of amorphous iron oxide nanoparticles produced by iron oxidizing bacteria Leptothrix ochracea," Journal of Magnetism and Magnetic Materials, 310, 2405, (2007).

T. Sakai et al, "Chemical modification of biogenous iron oxide to create an excellent enzyme scaffold," Organic Biomolecular Chemistry, 8, 336 (2010).

T. Ema et al, "Highly active lipase immobilized on biogenous iron oxide via an organic bridging group: the dramatic effect of the immobilization support on enzymatic function," Green Chemistry, 13, 3187 (2011).

T. Suzuki et al, "Environmental microbiology: silicon and phosphorus linkage with iron via oxygen in the amorphous matrix of Gallionella ferruginea stalks", Applied and Environmental Microbiology, 78, 236 (2012).

M. Furutani et al, "Initial assemblage of bacterial saccharic fibrils and element deposition to form an immature sheath in cultured Leptothrix sp. strain OUMS1", Minerals, 1, 157, (2011).

K. Mandai et al, "Iron oxide-immobilized palladium catalyst for the solvent-free Suzuki-Miyaura coupling reaction", Tetrahedron Letters, 53, 329, (2012).

H. Hashimoto et al, "Preparation, microstructure, and colour tone of microtubule material composed of hematite/amorphous-silicate nanocomposite from iron oxide of bacterial origin", Dyes and Pigments. Available online 6 July 2012. (doi. 10.1016/j.dyepig.2012.06.024).

Topics : Letters from alumni

Graduated in 2000 from Faculty of Science Department of Mathematics Currently, head of the Benesse Corporation office in Beijing, China

It has been twelve years since I graduated from Okayama University. Looking back on my time at there, I am reminded of how that experience has been the driving force that propelled me into my current position. Today I would like to share some of my memories from university and work.

After joining Benesse, I spent about ten years in Japan doing sales and product development, after which I was sent to our Shanghai office in 2009. There was a company-wide call for applications for the China post, and I decided to give it a shot because penetrating the Chinese market seemed like a good way to test my strengths. These days, growth in the Chinese education business is covered in international news bulletins but when I came to China this was not a popular destination for work postings and we at Benesse were only just starting to get things off the ground. We have since relocated the base of our Chinese operations to Beijing, and we spend our days busily holding events to promote Benesse's Shimajiro series of learning aids among Chinese kids and operating our network of branches.

At Okayama University, not only were classes challenging, but the weekly assignments I got from the Tasaka seminar, which focused on algebraic number theory, involved hours of looking at reference materials and doing drills before I could complete them. My lasting impression is that the academic work was a genuine challenge that took a lot of patience and tenacity rather than simply learning formulae and solving puzzles. Meanwhile, I had also joined the tennis club and organizing myself so that I achieved a proper balance between club activities and my studies really helped me grow as a person.

Okayama University is a comprehensive institution, so joining an extracurricular club was a good way to make friends with people studying in faculties that were completely unrelated to science, such as law, arts, and economics. Indeed, these clubs help broaden your horizons. Given the apparent incongruence of a mathematics major ending up working at the overseas office of an education company, it is quite possible that my fate was influenced by having friends in such a broad range of fields.

Working overseas, I have learned that different countries have different lifestyles, customs, and cultures. When discussing projects with colleagues, we get a lot of different opinions so it takes real leadership to coordinate everyone together into coherent action—it's hard work. At those times, my behavior is based formed on the training I underwent at math seminars because it is important when trying to get people to do something that you change their behavior gradually based on facts and numbers. In this way, the things I learned at university are proving useful in my management work.

I have learned that there are surprisingly many things that cannot be fully understood until you try them. So often, things don't go as we hoped and I have experienced as much failure as the next man. Whenever we hit a wall, it is easy to find excuses to give up or do nothing, but I make a conscious effort to try and come up with ways in which I can move forward with what I was trying to do.

Working in Beijing provides opportunities to connect with businessmen from all around the world and I am proud to tell them that I graduated from Okayama University. One of the areas in which my alma mater invests great effort is fostering a mindset of fellowship among alumni and, as such, the Okayama University alumnus network boasts a strength that many national universities fail to match. For instance, when I was still in Japan, I attended events where graduates going back as far as the old "No. 6 High School" (Okayama University's predecessor) made a genuine effort to contribute to the development of their successors into well-rounded people. It is my fervent hope that the network expands to incorporate overseas alumni in addition to those in Japan.

When Benesse was first set up in Beijing in 2010, we had just one Shimajiro Shop, but that has since grown to a network of 39 stores. There are now more than 480,000 Shimajiro club members throughout China, and there is a palpable increase in their expectations and demands towards Benesse. The Japanese media constantly talk about the speed of this growth in China, but the surge experienced at Benesse is even more rapid than media reports. So there is considerable pressure during work and but the education I received at Okayama University stands me in good stead for the challenges ahead.

Topics : Okayama Travelogue

Okayama Korakuen: one of the three most beautiful gardens in Japan

The beautiful gardens of 'Okayama Korakuen' were completed in 1700 at the behest of Lord Ikeda Tsunamasa. Located within a short distance from Okayama Station, the gardens, paintings, and records from the Ikeda family offer a firsthand insight into the history of the Edo period.


Sawa-no-ike Pond

The gardens cover an area of 133,000 sq. meters and include luscious green lawns, flowers and trees, a 640 m long stream, and unique buildings such as the Jigen-do Shrine.

Notable buildings include the Enyo-tei house, the most important building in the grarden used by the lord when he was visiting Korakuen; Noh stage and Eisho; and the Ryuten rest house.


Okayama Castle as seen from Kourakuen

The gardens are also famous for the wide selection of flowers and trees such as the Yoshino and Weeping cherry trees that bloom in the spring; Satsuki azalea; Japanese iris; and camellia japonica.

The famous Korakuen Cranes have been a feature since the Edo period and can be seen in specially constructed aviary in the gardens.

Visitors can hire an audio guide to the gardens for a understanding of the features of their history and details about the multitude of plants and buildings.

Further information

Website: http://www.okayama-korakuen.jp/english/index.html

Topics : Club Activities

Okayama University Weight Training Club
Work hard play hard!

Since being established in April 1990 the Okayama University Weight Training Club has pursued activities centered on powerlifting and body building. Powerlifting competitions consist of squat, bench press and dead lifting contested over different weight classes.

Yoshito Nishimura attempting a 267.5 kg squat.

The Club's founding principles are not limited to competitions. Needless to say the members want to be number one in Japan and participate in international competitions, but more importantly, the senior members of the club want to support the junior counterparts to graduate and become active members of society. Professor Koji Miura has been the advisor to the club since its inception. The Club currently has 24 male and 9 female members.

Members of the Okayama University Weight Training Club.

In 1994 the club was victorious in the group category of the All Japan Students Competition, and notably, the club has been champions of Japan 10 times. Also, members of the club have qualified for World Junior Championships almost every year, and have been first and second many times in a wide range of different competitions and weight classes.

Surprisingly, and in spite of the tremendous success of the club in competitions, many of the newcomers are beginners having trained only a couple of times prior to joining the club. The members themselves design exercise menus to maximize training sessions held during the short times between lectures and studies. Furthermore, the Alumni Association and Support Association both support the activities of the Club.

The club captain is Yoshito Nishimura—a medical student whose recent achievements include winning first place in the 74 kg weight class in the 2012 All Japan Students Powerlifting Championships and qualifying for the 2012 World Championships.

In 2011 the Club was in 2nd place in the 66 kg class, and this year the goal is first place. "As this year's captain and as the culmination of four years my goal is first place at the world championships," says Nishimura. "I am training hard so that I can stand on the highest step of the awards podium."

Update: Yoshito Nishimura won second place in two consecutive competitions in the 66 kg class of the World Junior Powerlifting Championship held in Szczyrk, Poland.

