



Set of mukōzuke (sashimi receptacles) with radish sprouts design in overglaze enamel, silver decoration  
(The 8th Modern Tea Ceremony Ceramics Exposition, TOKI Oribe First Prize, 2015)

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#### Research interests

Pottery, education in arts and crafts,  
pottery materials



## Exploring traditional pottery techniques and raw materials, and communicating possibilities of expression



Ceramic and porcelain are colored with pigments derived from minerals, such as cobalt for blue, iron for brown, and feldspar for white. Minerals are generated under high pressures and temperatures in the depths of the earth. Pigments made from such minerals withstand the firing temperatures of 1250°C for porcelain and the slightly lower 900°C for ceramics, giving the vivid colors that adorn works of pottery.

Art has played a myriad of roles that have changed with the times. Pottery, representing diverse techniques and attitudes founded on traditions engraved in history, has always remained a familiar form of art that has also played a functional role in people's daily lives. Works of pottery are culminations of raw materials, traditional techniques, and the potter's expressiveness, all closely intertwined, and they illuminate and inspire people's daily lives. Japan has a long history of pottery production, which still continues to develop further, thanks to technical and technological advances. Japanese pottery represents the ever-expanding breadth of expressions that can be made throughout the production process, from the selection of raw materials to firing. Prayers by the ancients took shape as Jomon pottery, whereas the uniquely Japanese art of the tea ceremony gave birth to ceramics of the Azuchi-Momoyama Period. Unceasing efforts by ancient artists have led to modern ceramic art representing diverse styles and forms. At the core of this evolution are the techniques that have been transmitted, improved, and perfected over the years. With this in mind, I study and

analyze ceramic techniques and raw materials of the past and redefine them from a contemporary standpoint to examine the techniques of decorative expression.

Concretely, I am developing a new approach to ceramic expression, starting from the traditional drawing technique with color paints, and developing a new technique by combining it with precious metals such as gold, silver, and platinum. This method is fascinating because it can beautifully combine the typical clearness of ceramic ware with vivid colors. However, since ceramic ware is completed by firing at high temperatures in the kiln, the technique poses various problems, such as pigments detaching from the pot surface and discoloration, due to the different melting points of gold, silver, platinum, paints, and other pigments, and their chemical reactions. I also constantly run into

other difficulties, such as not obtaining the exact color I want or having pots break in the kiln. So, to overcome these problems, I am also trying to develop a method to stabilize pigments that are perfect for firing.

With successful research outcomes, a new expression can be established, and ceramic texture can be enhanced with the nobleness of precious metals and vivid colors. It will be a totally novel decorative technique, which will add a new page to the history of ceramic expression. Tangible results of this research will be communicated to society as works of ceramic art. In the university's studio, we carry out research and education in such a way that one can have a multiplier effect on the other: students and faculty members conduct research together and communicate their research findings through seminars and workshops to younger students and students to come who will lead the future.



Prof. Idogawa, an artist and a researcher, says that his ceramic art is supported both by the artistic intuition he has developed through experience and concrete numerical data accumulated over the years.



(Left) Bowl with silver and overglaze enamel decoration (recipient of the Prince Takamatsu Memorial Prize at the 62nd Japan Traditional Art Crafts Exhibition, 2015)  
(Right) Bowl with Calopteryx atrata design in overglaze enamel, silver decoration (selected for the 66th Japan Traditional Art Crafts Exhibition, 2019)

Background photo: Silver powder is an indispensable ingredient for the technique *gindei saiji*, which Prof. Idogawa uses in his ceramic works. The technique involves applying *gindei* (silver paint) made of silver powder and *funori* (seaweed-based glue) all over the surface.

## Distinctive research facilities

### Attached Research Institute

#### Research Institute for Radiation Biology and Medicine

The Institute conducts comprehensive research projects on the effects of radiation on the human body, ranging from cutting-edge basic research in genomics to advanced clinical deployment of regenerative medicine, etc. While being involved in research and development of medical treatments for A-bomb survivors for over half a century, the Institute is actively engaged, as a research hub in the field of radiation disaster medical science, in joint research projects with researchers and doctors across the country.



### Joint Education and Research Facilities on Campus

- Research Institute for Nanodevice and Bio Systems
- Research Institute for Higher Education
- Information Media Center
- Natural Science Center for Basic Research and Development
- Morito Institute of Global Higher Education
- Center for the Study of International Cooperation in Education
- Health Service Center
- The Center for Peace
- Environmental Research and Management Center
- Hiroshima University Museum
- Beijing Research Center
- Hiroshima Astrophysical Science Center
- Institute for Foreign Language Research and Education
- Hiroshima University Archives