



Mazarin Chest, circa 1640; ©Victoria and Albert Museum, London

The Magic of Urushi Lacquer Much More than Meets the Eye

Rupert Faulkner, Great Britain



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Display of Edo period maki-e for the Japanese market, Victoria and Albert Museum, Toshiba Gallery, 2015; ©Victoria and Albert Museum, London

Motivation During my almost 37 years as a curator at the Victoria and Albert Museum, V&A, I initiated and participated in numerous projects involving Japanese lacquerware, which is to say objects whose manufacture relies primarily on the use of urushi. The Victoria and Albert Museum's collection of Japanese lacquerware is very extensive. The majority of pieces date from the Edo (1603-1868) and Meiji (1868-1912) periods and were acquired mainly during the late 19th and early 20th century. In addition to a large number of items produced for the internal Japanese market, the collection includes a small group of extremely high-quality objects made in the second quarter of the 17th century for export to Europe. The largest and most spectacular of these is the Mazarin Chest, which formerly belonged to Cardinal Jules Mazarin, the chief minister to Kings Louis XIII and Louis XIV of France from 1642 until his death in 1661. It was manufactured in Kyoto and shipped to Amsterdam by the Dutch East India Company in 1643.

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*Yamashita Yoshihiko and Shayne Rivers working on the Mazarin Chest, 2005
©Victoria and Albert Museum, London*

From 2003 to 2013 the Mazarin Chest was the subject of a major research and conservation project, co-funded by the Toshiba International Foundation, TIFO, and The Getty Foundation. The planning and execution of the conservation treatment was undertaken by Shayne Rivers of the Victoria and Albert Museum's Conservation Department and Yamashita Yoshihiko, an independent specialist lacquer conservator who between 2003 and 2008 travelled annually from Tokyo to work in London. I was responsible for the entire Mazarin Chest Project along with Shayne Rivers.

The Mazarin Chest has pride of place in the Victoria and Albert Museum's Toshiba Gallery of Japanese Art, where it is accompanied by an interactive installation and displayed alongside historic lacquers produced for the Japanese market. The Toshiba Gallery opened in December 1986 in a prime location near the museum's main entrance as the UK's first permanent museum gallery dedicated exclusively to Japanese art and design.

In 2013, following the extension of the Toshiba Corporation's naming of the gallery, an ambitious programme of renewal and redisplay was implemented. I was Lead Curator of the project, which was completed in November 2015.

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*Murose Kazumi demonstrating during Japanese Studio Crafts, 1995
©Victoria and Albert Museum, London*

The most significant difference from the 1986 configuration was the increase in space devoted to modern and contemporary Japanese art and design. The Victoria and Albert Museum had begun collecting in these areas in the early 1980s and, reflecting growing public interest in contemporary Japan, they have become increasingly central focuses of concern.

During my time at the Victoria and Albert Museum, I devoted much energy to building a collection of Japanese studio crafts. This is now one of the largest collections of its kind outside Japan and will be further expanded by my successors. The work of makers specialising in the use of urushi has been one of several key areas of interest. Early acquisitions were presented along with works in other craft media in an exhibition in 1995 entitled *Japanese Studio Crafts: Tradition and the Avant-Garde*.

An aspect of the exhibition's education programme I had been especially keen to realise entailed inviting Japanese makers to London to spend up to two weeks each demonstrating and teaching in a purpose-built space inside one of the exhibition halls. Among them was Murose Kazumi, a lacquer artist specialising in *maki-e* or sprinkled picture decoration who had visited London a few years earlier to assess the scope and condition of the museum's Japanese lacquer collection.

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The son of a lacquer artist, Murose Kazumi graduated from the Japanese Lacquer Course at Tokyo University of the Arts in 1974. In 1991 he founded the Mejiro Institute of Urushi Research and Restoration. He combines historical research and practical conservation with a busy career as an individual maker. He has also been an ardent promulgator in Japan and abroad of knowledge about Japanese urushi culture. In 2008 he was accredited by the Japanese Government as an Important Intangible Cultural Property (Living National Treasure) for his contribution to the art of maki-e. In 2020 the Mejiro Institute of Urushi Research and Restoration published an invaluable guide entitled the *Essential Bilingual Glossary of Japanese Urushi (Lacquer) Materials and Techniques*. This is available online at urushigakusha.jp.

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The Victoria and Albert Museum has benefited greatly over the years from Murose Kazumi's advice and expertise, and from the training he and his studio have provided to many of its conservators and curators. His most recent collaboration with the museum has been in connection with the creation of a dedicated space for the conservation of East Asian lacquer in a new storage and research facility due to open in East London in 2024.

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Objective Japanese lacquerware, especially maki-e, has been known about and prized in the West for many centuries. It was so sought after that a technique called *japanning* was invented in the 17th century to imitate the dazzling gold-on-black gorgeousness of Japanese maki-e. It also became common, especially in 18th century France, for pieces of Japanese maki-e to be cut up into panels for incorporation into cabinets, desks, commodes, chests of drawers and other items of furniture.

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French commode incorporating panels of Japanese maki-e, Paris, 1760-65
©Victoria and Albert Museum, London

Although there has been a long-standing appreciation of Japanese lacquerware in the West, it is only quite recently that reliable information has become available about how objects made using urushi were and are produced, how they should be looked after, and what methods of conservation are most suitable for their treatment. Most of the information is in Japanese, but the increasing engagement with these questions of non-Japanese curators, conservators, scientists, and other researchers has produced a substantial body of foreign language literature, much of it in English.

What follows is an introduction to some essential facts about urushi and how it is used. The intention is to help the non-specialist understand and appreciate what they are looking at when encountering something created with urushi. As the subtitle *Much More than Meets the Eye* suggests, the finished appearance of what one sees reveals little about the complex and labour-intensive processes that have gone into its making.

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Details of lid interior (right) and lid exterior (left) of the Mazarin Chest; ©Victoria and Albert Museum, London

Context With a history of more than 9000 years, urushi has been used in Japan to create religious sculptures and functional, often domestic objects, and also for the adornment of buildings. Urushi is also used in their restoration and conservation. It is therefore a material about which familiarity is essential to the understanding of Japanese art and material culture.

One of the aims of the Mazarin Chest Project was to develop a methodology respectful of the Japanese belief that lacquerware should only be repaired and conserved with the same materials that were used in their manufacture, and at the same time mindful of the modern western conservation ideal of reversibility. Much of the scientific and conservation research carried out during the project was undertaken to establish whether or not it was acceptable to use urushi – any treatment with which is non-reversible – on the Mazarin Chest.

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The conclusion was that as long as an object treated with urushi could be retreated by the same means in the future, the use of urushi was acceptable. This articulation of the acceptability of retreatability, especially when reversibility is unachievable, was an important outcome of the Mazarin Chest Project. It marked a breakthrough from the polarisation of attitudes that had previously made it difficult for Japanese and non-Japanese conservators of lacquerware to collaborate effectively.

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A warning to remember if visiting a lacquer workshop or studio is to avoid coming into contact with liquid or only partially cured urushi. This is because urushiol, the main ingredient of urushi also found in poison ivy and oak, can cause eczematous dermatitis. Some people are immune, but most have an allergic reaction, which can be severe. Urushi loses its toxicity once its urushiol content has polymerised and hardened, so lacquer items one encounters in shops, restaurants and other daily contexts are perfectly safe.

Another point to bear in mind is that while objects and surfaces made using urushi can withstand temperatures of up to 300 degrees centigrade and are resistant to alcohol, acid, and alkali, they are susceptible to scratching and other kinds of mechanical damage. Most seriously over the long term is the way urushi surfaces degrade and disintegrate as a result of exposure to ultraviolet light. The micro-cracking caused by UV light explains, for example, the loss of sheen of the exterior surfaces of the Mazarin Chest relative to the glossiness of its lid interior.

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Raw, filtered urushi; Photo: Dana Melchar; ©Victoria and Albert Museum, London

Urushi is the Japanese term for the sap of the *Toxicodendron vernicifluum*, a deciduous, broadleaf tree of the sumac or Anacardiaceae family found in China, Japan, and Korea. Its main constituent is a naturally occurring oleoresin called urushiol. When exposed to moisture and air at an appropriate temperature, urushiol polymerises into a hard and durable plastic-like substance.

The character of urushi varies according to the time of year it is tapped. Because polymerisation depends on the presence of moisture, urushi with a high-water content hardens more quickly than urushi containing less water. Urushi with a low water content, whose longer hardening time makes it suitable for producing best quality outer coatings, is obtained at the peak of summer when temperatures are high and there is little rain. This type of urushi is known as *sakarihen-urushi* (peak-cutting urushi). Types of urushi obtained at other times of the year are also used selectively for particular purposes and are sometimes blended.

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After the sap has been tapped, it is processed in one of two ways. Filtering to remove stray pieces of bark from the urushi tree produces raw urushi (*ki-urushi* or *kijomi-urushi*). Alternatively, if, prior to filtering, the sap is homogenised by being slowly stirred in a large vat – a process called *nayashi* – and then has its water content reduced (*kurome*) by being stirred while warmed over a heat source or placed in the sun, the result is refined urushi (*sugrome-urushi*). If the sap processed in the latter manner has been collected at the peak of summer, the refined urushi it produces is known as transparent urushi (*suki-urushi* or *kijiro-urushi*).

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Transparent urushi can be mixed with pigments to make coloured urushi (*iro-urushi*). In the past the palette was limited to red, brown, yellow, green, and black, but the availability of modern synthetic pigments means that contemporary makers have access to a much wider range of colours than their predecessors. Black urushi (*kuro-urushi*) has always been the most frequently used variety. One way of making this is by mixing lamp-black or pine soot with transparent urushi. The other is to add powdered iron or ferrous hydroxide to unprocessed sakarihen-urushi sap prior to refining. The chemical reaction that ensues causes the urushi to turn black. Black urushi made in the latter way is called *roiro-urushi* or *kuro-roiro-urushi*. *Roiro* refers to *roiro-shiage* or roiro finishing, which, as explained in more detail below, is a process used to polish a final urushi surface, often black but not necessarily so, to a high gloss.

Mixing raw urushi with a paste made of water and flour (*mugi*) produces a strong adhesive known as *mugi-urushi*. The addition of wood powder or pulverised hemp fibre to *mugi-urushi* makes an extremely hard, initially putty-like filler called *kokuso*. Both of these materials are essential to lacquerware production and to its repair and conservation. A softer and more easily worked alternative to *mugi-urushi* typically used in Wajima in Ishikawa Prefecture is made by mixing raw urushi with rice glue. This is called *nori-urushi*. *Nikawa* or animal glue is another adhesive used in the making, repairing, and conserving of lacquerware.

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*Columbine-shaped kanshitsu tray, 2008, Masumura Kiichiro (1941-)
Courtesy of Japan Kogei Association*



*Kanshitsu sculpture: Inner side – Outer side, 2005, Tanaka Nobuyuki (1959-);
Photo: Suemasa Mareo
Courtesy of 21st Century Museum of Contemporary Art, Kanazawa*

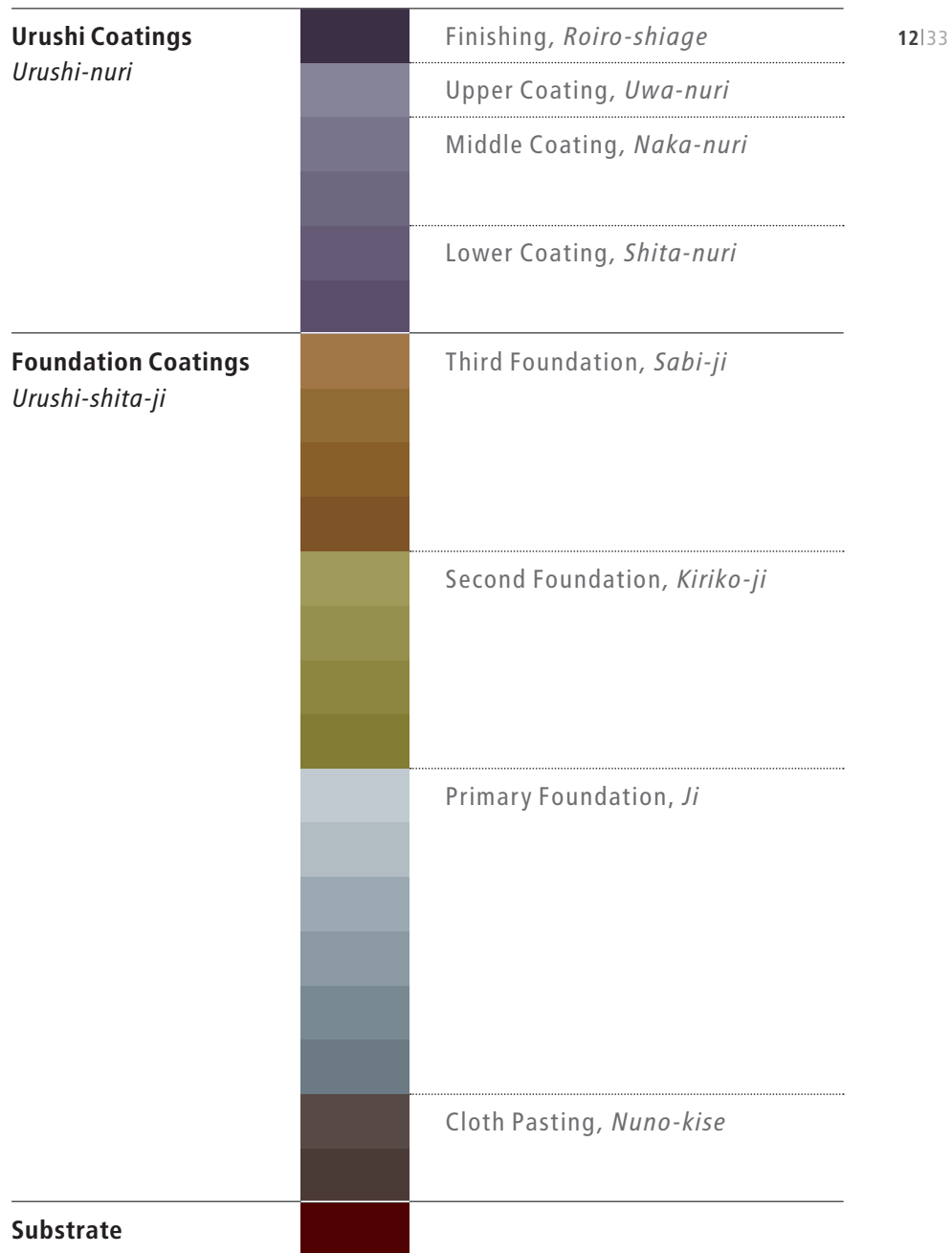
Urushi and urushi-based adhesives, fillers and, as described below, *shita-ji* foundation coatings are compatible with a wide range of organic and inorganic materials. The materials most commonly used for the cores or substrates of urushi objects are wood and bamboo, especially the former. The main methods for fashioning wooden substrates are joinery, turning, carving from the block, and bentwood work. The timbers most commonly used are cypress, cedar, zelkova, horse chestnut, and paulownia. Other materials employed as substrates include paper, cloth, leather, ceramics, and metal. Urushi and urushi-based materials will also adhere to glass, acrylic and other kinds of plastic, and to various modern composites that do not shrink or warp.

In the case of cloth, there is a long-established way of making substrates using a technique resembling papier-mâché. The difference is that instead of pasting layers of paper impregnated with water-based adhesive over a mould, fabric – most commonly hemp – and either muguri-urushi or nori-urushi are used. The technique is called *kanshitsu* or dry lacquer. It was invented in China and used extensively in Japan during the Nara period (710-794) to create Buddhist images. Because of the flexibility it allows for experimentation with new and one-off forms, the dry lacquer technique is used extensively by contemporary urushi artists to make vessels, containers, and sculptural objects.

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Plain lacquer (kyushitsu) layer structure according to the Essential Bilingual Glossary of Japanese Urushi (Lacquer) Materials and Techniques. Published by the Mejiro Institute of Urushi Research and Restoration, this is the principal source for the information presented in this article. It covers many urushi-related terms. Courtesy of Murose Kazumi, Mejiro Institute of Urushi Research and Restoration



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Maki-e tiered box
2004, Murose Kazumi (1950-)
©Victoria and Albert Museum, London

Basic Process of Preparing a Plain-Lacquered Urushi Surface

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Substrate

Works by leading urushi artists such as Murose Kazumi depend for their exceptional quality on being produced using a lengthy multi-step process beginning with the filling of any gaps and flaws in the substrate with koku-so. This is followed by priming the entire surface with raw urushi applied with a *hera* or wooden spatula. Very importantly, the successive applications of material involved in creating a plain-lacquered surface on a substrate are each followed by hardening and abrading. At the outset, as in these first two steps, the abrading is usually done with sharp blades and sandpaper, but thereafter it is undertaken with whetstones of increasing fineness and then charcoal of varying grades of hardness dipped in water. The primed wooden substrate is then strengthened by cloth pasting, a process called *nuno-kise*. The adhesive used for cloth pasting is either mugu-urushi or nori-urushi and the fabric is most usually hemp. Depending on the shape of the item, the cloth may cover its entire surface or only vulnerable areas such as edges and corners.

Foundation Coatings

Cloth pasting is followed by creating an *urushi-shita-ji* or urushi-based foundation. This consists of up to three multi-layered coatings known as *ji*, *kiriko-ji*, and *sabi-ji*. The *ji* or primary foundation coating is the most important one. While there are different ways of producing a *ji*, the *hon-kata-ji* or true hard base method is the one most commonly used today. It entails making a paste of water and powdered *jinoko* clay from Kyoto, or a paste of rice glue and *jinoko* clay from Wajima and mixing it with raw urushi. The clay and urushi mixture is usually applied in three layers with a wooden spatula, each layer being left to harden before being abraded with a whetstone in readiness for the next application. The *jinoko* is sieved into three grades – coarse, medium, and fine – and is used in that order for the consecutively applied layers of urushi mixed with clay. *Sabi-ji*, the third and most finely grained of the three kinds of foundation coating, consists of a paste of *tonoko* and water mixed with raw urushi. *Tonoko* can be either very fine clay obtained by sedimentation of *jinoko* or powder made by pulverising fine-grade whetstones. *Kiriko-ji*, the intermediate type of foundation coating, is made by blending *sabi-ji* with *jinoko*.

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Urushi Coatings

Once the urushi-based foundation has been completed, work progresses to the application of coatings of pure urushi using *urushi-bake*, which are flat brushes made from human hair. These are available in various widths. The procedure is called *urushi-nuri* or lacquer brushing. There are three stages, namely *shita-nuri*, *naka-nuri*, and *uwa-nuri*, meaning the brushing on of lower, middle, and upper coatings. Lower and middle coatings can consist of several layers of urushi, each application being followed by hardening and abrading with charcoal dipped in water. The aim is to provide as perfect as possible a surface onto which to brush the all-important upper coating, which in principle is applied only once. The upper coating is either left as it is after hardening, in which case the descriptor *nuritate* or unpolished finish is used, or it can be polished to a high gloss using the *roiro* finishing procedure.

Roiro finishing begins with abrading a hardened upper urushi coating with soft charcoal dipped in water. This is followed by *dozuri*, which is polishing with a cloth dipped in a mixture of rapeseed oil and tonoko. Dozuri is followed by *suri-urushi* or urushi rubbing, whereby raw urushi rubbed on by cloth is used to fill any scratches, with any excess remaining on the surface being wiped away before it has hardened. The cycle of dozuri followed by urushi rubbing is repeated until a flawless surface has been produced. The next and final step, known as *tsuya-age* or bringing out the gloss, entails polishing with rapeseed oil mixed with baked and pulverised deer antler (*tsunoko*) or a similarly ultrafine abrasive. The polishing is carried out with the fingertips or the palm of the hand.

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Colour Variations

The final colour of a completed plain-lacquered object or architectural surface is dependent on the types of urushi used for the lower, middle, and upper urushi coatings. Black is achieved by the use for the upper coating of either the aforementioned transparent urushi mixed with soot, or *kuro-roiro-urushi* as made by adding powdered iron or ferrous hydroxide to unprocessed sakarihen-urushi sap prior to refining. The latter can be polished to a high gloss using the roiro finishing procedure, but not the former. An alternative method is to use urushi mixed with soot for the lower and middle coatings and transparent urushi for the upper coating. This was the method used on the Mazarin Chest.

In the case of red, the lower and middle coatings are executed using black urushi, and transparent urushi pigmented with mercury sulfide is used for the upper coating. This is called vermilion urushi (*shu-urushi*). Different shades of colour ranging from deep vermilion to yellowish red can be made by varying the amounts of pigment in the mixture.

The traditional way of making yellow urushi was by pigmenting transparent urushi with arsenic sulfide, a highly toxic substance historically known as orpiment. To make green urushi, indigo blue dye was added to the orpiment prior to mixing with transparent urushi.

Mixing vermilion urushi with black urushi produces a purplish colour. Either type of black urushi can be used, but the colour is more stable with black urushi made with soot. Mixing *bengara* or red ochre – the main ingredient of which is ferric oxide – with transparent urushi produces the distinctive brownish red colour of *bengara-urushi*.

The application of transparent urushi over a middle coating of either *shu-urushi* or *bengara-urushi* on top of a black urushi lower coating produces a caramel colour. The lacquering procedure in this case is called *tame-nuri*.

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Kinma box with gumi berries design, 1996, Ota Hitoshi (1931-2019)
Courtesy of Japan Kogei Association

Decorative Techniques

Kinma, Chinkin, and Choshitsu

There are many ways to decorate a plain-lacquered urushi surface. Broadly speaking there are techniques for creating designs by cutting into a surface and others whereby designs are applied on top of a surface. *Kinma* – incised and colour-filled lacquer, *chinkin* – incised and gold-filled lacquer, and *choshitsu* – carved lacquer, are the best known. All three techniques originated in China; kinma was introduced to Japan via Thailand and Myanmar in the 19th century.

In the case of kinma, urushi of a contrasting colour to that of the plain-lacquered ground is applied over a design shallowly incised into its surface. The surface is abraded after hardening so that the design reappears with the coloured urushi remaining only in the incisions. It is not uncommon for more than one colour of urushi to be used. In the past, patterns were created solely by fine-line engraving, but nowadays this is used alongside other incising techniques. Takamatsu in Kagawa Prefecture is famous for kinma production.

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*Chinkin box with design of a bamboo thicket, 1992, Mae Fumio (1940-),
Photo: Benrido, inc.
Courtesy of Japan Kogei Association*



Choshitsu container, 16th century, China; ©Victoria and Albert Museum, London

Chinkin resembles kinma in the way designs are incised into plain-lacquered grounds. Instead of coloured urushi being applied, however, raw urushi is rubbed into the incised surface using the suri-urushi technique mentioned earlier in relation to roiro finishing. The urushi acts as an adhesive for gold foil pressed into the incisions. Wajima is a notable centre for chinkin production.

Preparing the body of a piece of choshitsu is far more time consuming than creating a normal plain-lacquered body. This is because hundreds of applications of coloured urushi are required to make the three to seven millimetre thick coating of urushi needed for low or sunken relief carving. The urushi may be single-coloured or multi-coloured, in which case the order of application of colours has to be carefully planned in accordance with the intended design.

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Hyomon roundel, Mazarin Chest detail
©Victoria and Albert Museum, London



Raden roundel, Mazarin Chest detail
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Hyomon and Raden

There are two important decorative techniques each with long histories and a wide distribution of use in East Asia that are usually described in English as types of inlay. One is *hyomon* – metal sheet inlay, and the other is *raden* – shell or mother-of-pearl inlay. The metals used for *hyomon* include gold, silver, tin, and lead. The metal sheet is adhered with *urushi* to the *urushi*-based foundation or, if very thin – as is normally the case with gold and silver – to the middle *urushi* coating. Once completed and firmly hardened into place, the design is covered in thin layers of *urushi* until it is no longer visible. This is followed by abrading with charcoal dipped in water until the design reappears flush with the surrounding surface.

Making a design from thick shell (*atsugai*) entails carving into the *urushi* coating and underlying *urushi*-based foundation to make openings into which cut-out pieces of shell are fitted. The shell is affixed with *mugi-urushi* to the fabric applied to the substrate at the cloth pasting stage. The surface of the shell may be embellished with fine-line engraving or carved in low relief. Thin shell (*usugai*), by contrast, is adhered to the *urushi*-based foundation with *roiro-urushi* mixed with raw *urushi*. Against its black background the shell has a distinctive iridescence, the colour and intensity of which depend on the type and thickness of shell used. Variation can be introduced by colouring the back of the shell with pigments, metal foil, or metal powders. Once the design has been completed and is firmly hardened into place, it is covered with thin layers of *urushi* until it is invisible. This is followed by abrading with charcoal dipped in water until the design reappears flush with its surroundings.

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UV-damaged urushi surface, Mazarin Chest detail
©Victoria and Albert Museum, London

Maki-e

The defining characteristic of maki-e is the use of *maki-e-fun* or maki-e powders, most usually gold and silver but others as well, to create pictorial designs on what are most frequently plain, black-lacquered surfaces. The powders are sprinkled over areas onto which designs have been painted in urushi and are fixed in place as the urushi hardens. This is followed by the application of urushi over the design to consolidate it. Maki-e is a unique product of Japanese craft culture whose origins can be traced back to the Nara period. Rapid strides were made during the latter half of the Heian (794-1185) and following Kamakura (1185-1333) periods, with full maturity being reached in the early decades of the 17th century when, as it happens, the Mazarin Chest was made.

It was noted earlier that hardened urushi is damaged by exposure to UV light and that plain-lacquered surfaces lose their sheen due to micro-cracking. This also applies to urushi applied over a maki-e design to consolidate it. If the damage progresses too far and the urushi begins to disintegrate and fall away, the metal powders it was protecting become exposed and risk being rubbed off.

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Togidashi-maki-e, writing box detail, 19th century
©Victoria and Albert Museum, London

There are three principal ways of creating a maki-e design, namely *togidashi-maki-e* or polished out maki-e, *hira-maki-e* or low relief maki-e, and *taka-maki-e* or high relief maki-e. There are several variations of these together with a number of additional techniques that increase the range of expressive effects. There is also the technique of *ji-maki* or sprinkled ground, a term covering a variety of methods whereby metal powders are sprinkled over urushi brushed onto areas of a surface not forming part of the pictorial design.

Togidashi-maki-e is the earliest maki-e technique to have been perfected. It entails sprinkling relatively coarse maki-e powders over a design painted in urushi on an abraded middle urushi ground. Once the design is fixed in place, urushi is applied around and over it until it is completely covered. This is followed by abrading with charcoal dipped in water until the design reappears flush with the surface around it. Finishing is then carried out using dozuri polishing with a cloth dipped in a mixture of rapeseed oil and tonoko followed by polishing to a high gloss with the fingertips or palm of the hand using rapeseed oil mixed with baked and pulverised deer antler or a similarly ultrafine abrasive.

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Hira-maki-e, Mazarin Chest detail
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Taka-maki-e, Mazarin Chest detail
©Victoria and Albert Museum, London

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In the case of *hira-maki-e*, the design is painted onto a finished plain-lacquered surface rather than an abraded middle *urushi* ground. The *maki-e* powders then sprinkled on are much finer than those used in *togidashi-maki-e*. Once the design is fixed in place the *suri-urushi* technique is used to rub *urushi* over the sprinkled powders in order to consolidate them. After this has hardened the areas with designs are polished to a high gloss using the fingertips or palm of the hand and rapeseed oil mixed with baked and pulverised deer antler or an alternative ultrafine abrasive.

The *taka-maki-e* procedure begins with the creation of low-relief features such as the rocky ground and pine tree in the detail from the Mazarin Chest shown above on a finished plain-lacquered surface. Depending on requirement, this is done using *urushi* or *urushi* bulked out with a filler. This can be *sumiko* charcoal powder, *jinoko* powder, *tonoko* powder, or *suzu-fun* – powdered tin. The contours are then softened by the application of several layers of *urushi*. The next step is to cover the raised areas with a *ji-maki* sprinkled ground using powdered gold, silver, or another material. Consolidation and polishing to a high gloss complete the process.

Central to the realisation of *maki-e* decoration is the *fun-zutsu* or powder tube. This consists of a section of bamboo, a length of reed, or a feather shaft. One end is cut at an angle and covered with a piece of silk mesh. *Maki-e* powder is introduced from the other end and a light flicking of a finger against the tube causes the powder to sprinkle through the mesh. *Fun-zutsu* are made with different grades of mesh to accommodate powders of different grain sizes, of which there can be as many as 20.

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Nashi-ji, writing box detail, 1725-1775; ©Victoria and Albert Museum, London

Maki-e powders are made by grinding metal ingots by file and are available in different shapes as well as grain sizes. Raw filings are called *yasuri-fun* or filed powder. Yasuri-fun shaped into spheres is called *maru-fun* or round powder. Flattened maru-fun is referred to as *hirame-fun* or flat oval powder. Rolled and flattened so that the powder particles curl at their edges, hirame-fun becomes *nashi-ji-fun*, meaning pear skin ground powder. Nashi-ji-fun is used with a yellowish variety of transparent urushi to create a distinctive form of ji-maki ground in which the grains of powder appear to be suspended in a thin layer of amber.

The enormity of the number of techniques and materials available and the almost infinite variety of types of powder that can be used explain why maki-e has for so long occupied centre stage in Japanese urushi culture. In the *Essential Bilingual Glossary of Japanese Urushi (Lacquer) Materials and Techniques*, maki-e or sprinkled picture decoration has its own dedicated section as it is a particularly complicated technique –and also the speciality of the author Murose Kazumi.

Techniques and materials can be combined in any number of ways and are often supplemented, as seen in the case of the Mazarin Chest, by the incorporation of metal sheet and shell or mother-of-pearl inlay. Although not to the same extent as with maki-e, the mixing of techniques is also a feature of contemporary kinma, chinkin, and choshitsu.

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Closing It is evident from this essay that it takes an enormous amount of skilled labour to produce a plain-lacquered object of quality, and that if this is embellished using maki-e or other means, additional labour of an even higher order is called for and further materials are required. Maki-e by definition entails the use of precious metals, traditionally and most notably gold and silver, but nowadays platinum as well. The deployment of precious metals and other costly materials is integral to the realisation of most other decorative techniques as well. Good quality lacquerware is, in short, very expensive. And in the case of pieces by well-known urushi artists or from top-end workshops, prices can be eye-wateringly high.

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This being said, the procedures as they have been described equate to Rolls-Royce standards of workmanship. And just as a motorcar can be bought for a fraction of the price of a Rolls-Royce, there are other, less exhaustive ways of making viable lacquerware. This is apparent from a comparison of the production methods used in the 23 lacquer manufacturing centres listed at kogeijapan.com.



Medicine jar, 2012, Sato Senro (1942-)
Courtesy of Gallery Tanaka

In the same way as there was a demand in the past for extravagant products like the Mazarin Chest, there is still a market today for the carefully crafted works of urushi artists who, like Murose Kazumi, belong to the Japan Kogei Association nihonkogeikai.or.jp. In contemporary Japan, however, new styles of living and the typically minimalist ambience of modern interiors have tipped the scales away from a desire for the ornate and decorative in favour of the simple, the understated, and the uncluttered.

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Kanshitsu sculpture: Surface Landscape #1, 2015, Ishizuka Genta (1982-)
Photo: Koroda Takeru



Serving tray with scattered straw design, circa 2000, Kado Isaburo (1940-2005);
Courtesy of t. gallery

Since the early 1980s and the pioneering initiatives of Wajima-based Kado Isaburo (1940-2005), there has also been a growing number of practitioners – and workshops, who shun the glorification of perfection associated with high-end lacquerware in their search for something more spontaneous and organic. The approach is similar to that of ceramicists who exploit the chance effects of firing and for whom the evidence of their engagement with their materials is a defining characteristic of the finished product. Theirs is an aesthetic based on revelation rather than concealment of process that now has an extensive following.

Another recent trend is the increasing number of makers whose interests lie in experimentation with abstract forms and the exploration of the unique qualities of plain-lacquered surfaces. The range and potential of work by this younger generation of makers have been admirably represented in a touring exhibition organised by the Minneapolis Museum of Art and its associated catalogue both entitled *Hard Bodies: Contemporary Japanese Lacquer Sculpture*.

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Rupert Faulkner was Senior Curator in the Asian Department of the Victoria and Albert Museum, V&A, until his retirement at the end of May 2021. Born in Yokohama and educated in Britain, he graduated from Cambridge University in 1977 with a degree in Japanese Studies. He spent the following seven years, three of them in the Archaeology Department of Nagoya University, conducting research into Japanese ceramic history. His doctoral thesis on the development of Seto and Mino ceramics from the 12th to 17th century was accepted by Oxford University in 1988. He joined the Victoria and Albert Museum in 1984 and was involved in preparations leading to the opening of the Toshiba Gallery of Japanese Art in December 1986. During his time at the Victoria and Albert Museum he was responsible in particular for the care, development, and study of the museum's collections of *ukiyo-e* woodblock prints, Japanese ceramics, and contemporary Japanese crafts. In 1995 he curated the exhibition *Japanese Studio Crafts: Tradition and the Avant-Garde* and published an accompanying book of the same title. In 2001-2002 he was joint coordinator of the Victoria and Albert Museum's programme of Japan 2001 events. He subsequently acted as curatorial consultant for the Japanese section of the Victoria and Albert Museum's International Arts and Crafts exhibition held in 2005 and co-managed a major Anglo-Japanese collaborative lacquer conservation project focusing on the Mazarin Chest, a spectacular example of early 17th century Japanese lacquer made for export to Europe. He also worked closely on the refurbishment and redisplay of the Victoria and Albert Museum's top-floor ceramics galleries, which opened in two stages in September 2009 and June 2010. He was instrumental in the development of the *Mazarin Chest Gallery Interactive* launched in November 2013 and was Lead Curator for the upgrade and redisplay of the Toshiba Gallery of Japanese Art, which reopened to the public in November 2015. In 2014 he was awarded the Japanese Foreign Minister's Commendation for his role in promoting the understanding of Japanese culture in the United Kingdom, and in 2020 received the Order of the Rising Sun, Gold and Silver Rays from the Japanese Government.

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Publications **A History of Japanese Lacquerwork**

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Von Ragué, Beatrix; 1976; Toronto: University of Toronto Press
Authoritative general history of Japanese lacquer work based on extensive research in Japan; originally published in German in 1967 as *Geschichte der Japanischen Lackkunst*

Crafting Beauty in Modern Japan: Celebrating Fifty Years of the Japan Traditional Art Crafts Exhibition

Rousmaniere, Nicole (ed.); 2007; London: British Museum
Exhibition catalogue. UK version of the exhibition *Waza no Bi: Dento Kogei no 50-Nen* (The Beauty of Skill: 50 Years of Traditional Art Crafts) held in Japan in 2003-2004; essays by Kaneko Kenji, Nicole Rousmaniere and Uchiyama Takeo

East Asian Lacquer: Material Culture, Science and Conservation

Rivers, Shayne; Faulkner, Rupert; Pretzel, Boris. (eds.); 2011; London: Archetype Publishing
Proceedings of the conference *Crossing Borders – The Conservation, Science and Material Culture of East Asian Lacquer* held at the Victoria and Albert Museum, 30-31 October 2009, with supplementary essays

Essential Bilingual Glossary of Japanese Urushi (Lacquer) Materials and Techniques

Mejiro Institute of Urushi Research and Restoration (ed.); 2020; Tokyo
Taxonomically organised glossary of 105 key urushi materials and techniques selected and described by Murose Kazumi, founder of the Mejiro Institute of Urushi Research and Restoration

[web-site](#)

Export Lacquer: Reflection of the West in Black and Gold Makie

Kyoto National Museum (ed.); 2008; Osaka: Yomiuri Shinbun
Catalogue of an exhibition curated by Nagashima Meiko of Japanese lacquerwork specifically made for export to Europe, and Japanese lacquerwork produced for the domestic market that reached Europe between the 17th and 19th century

Hard Bodies: Contemporary Japanese Lacquer Sculpture

Marks, Andreas; 2017; Minneapolis: University of Minnesota Press
Exhibition catalogue. An important study of a burgeoning field of contemporary Japanese lacquer practice

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Publications **Japanese Export Lacquer 1580-1850**

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Impey, Oliver; Jörg, C.J.A; 2005; Leiden: Hotei Publishing
Thorough and extensively illustrated survey of Japanese export lacquerware in European collections by two leading authorities on the subject

Japanese Inro

Hutt, Julia; 1997; London: Victoria and Albert Museum
Comprehensive study based on the Victoria and Albert Museum's collection of inro by a leading authority on the subject

Japanese Lacquer Art: Modern Masterpieces

Tokyo National Museum of Modern Art (ed.); 1982; New York, Tokyo, Kyoto: Weatherhill / Tanko sha
Comprehensive and extensively illustrated survey of the work of 20th century Japanese urushi artists

Japanese Studio Crafts: Tradition and the Avant-Garde

Faulkner, Rupert; 1995; London: Laurence King Publishing
Includes a chapter devoted to work by contemporary Japanese urushi artists

Lacquer: An International History and Collector's Guide

Bourne, Jonathan et al; 1984; Marlborough, Wiltshire, UK: Crowood Press
Useful survey of lacquer in its most widely understood sense written by leading western authorities

Maki-e Urushi: Kazumi Murose Works

Murose, Kazumi; 2014; Tokyo: Shincho sha
Selected works by the Living National Treasure (accredited in 2008)
Murose Kazumi made between 1975 and 2013

Nihon no Shitsugei (Lacquer Art of Japan), vols. I-VI

Okada, Jo et al (eds.); 1978; Tokyo: Chuo Koron sha
Copiously illustrated with photographs of Japanese lacquerware from earliest times up until the Meiji period (1868-1912); vols. I-IV: maki-e; vol. V: negoro-nuri, urushi-e; vol. VI: raden, Kamakura-bori, chinkin

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Publications **Ostasiatische und europäische Lacktechniken**

Kühlenthal, Michael (ed.); 2000; Munich: Arbeitshefte des Bayerischen Landesamtes für Denkmalpflege Munich

Proceedings of the conference Ostasiatische und europäische Lacktechniken / East Asian and European Lacquer Techniques held in Munich, 11-13 March 1999

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The Art Lover's Guide to Japanese Museums

Richard, Sophie; 2019; New Haven: Yale University Press

Well researched and informative up-to-date guide to Japanese museums of art; expanded second edition

Urushi Art: Glittering Moments in Time – A Tradition of Edo Gold-Sprinkled Lacquer

Mitamura, Arisumi; 2009; Tokyo: Ribun Shuppan

Biographic and technical survey of a surviving lineage of Edo (modern Tokyo) maki-e artists by the tenth generation head of the Edo Maki-e Akatsuka family and third generation head of the Mitamura family

Urushi no Waza: Japanese Lacquer Technology

Heckman, Gunther; Dei Negri, Jasmina; 2002; Ellwangen, Germany: Nihon Art Publishers

Thorough and extensively illustrated description of the materials and techniques used in Japanese lacquerware production; main texts in English; trilingual glossary on CD accompanied by three booklets with terms listed in alphabetic order by English, German, and Japanese respectively

Urushi: Works of Murose Kazumi

Murose, Kazumi; 2005; Tokyo: Arrow Art Works

Selected works by Murose Kazumi made between 1975 and 2005; essays by Yagihashi Shin, Kaneko Kenji, and Rupert Faulkner

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WWW-Sites

Collections: The Mazarin Chest

Catalogue entry on the Mazarin Chest in the Victoria and Albert Museum's Explore the Collections database with 432 mainly high resolution images taken at different stages of the Mazarin Chest Project
[web-site](#)

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Crossing Borders – The Conservation, Science and Material Culture of East Asian Lacquer

Conference held at the Victoria and Albert Museum, 30-31 October 2009; outline and list of papers presented
[web-site](#)

How to Use Urushi Lacquerware

Urushi tableware dos and don'ts
[web-site](#)

Japan Kogei Association

Handbook for the Appreciation of Traditional Japanese Crafts www.nihonkogeikai.or.jp/en/ that includes a section on *Urushi work*; the Japan Kogei Association's old website at www.nihon-kogeikai.com has a set of partially functioning English pages; the Japan Kogei Association operates under the umbrella of MEXT (Japanese Ministry of Education, Culture, Sports, Science and Technology) and its child agency, the Agency for Cultural Affairs; it is unrelated to the METI-sponsored Kogei Japan: Traditional Crafts of Japan
[web-site](#) Japanese

Japanese Architecture and Art Net Users System (JAANUS)

A bilingual English-Japanese online dictionary of Japanese architectural and art historical terminology containing over 8000 entries
[web-site](#)

Japanese Lacquer Store: Watanabe Shoten

Trilingual Japanese-English-Chinese website of Watanabe Shoten, a long established supplier of urushi materials and tools in the Ueno area of Tokyo with an on-line shopping portal
[web-site](#)

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WWW-Sites

Joboji Urushi

Rich bilingual Japanese-English website entitled *Urushi Nation Joboji*; Joboji is a lacquerware manufacturing centre in northeast Japan and the country's most important source of domestically produced urushi; 97% of the urushi used in Japan is imported from abroad, mainly China; videos within the website are listed separately for convenience; it is recommended to start with the following three sections in the order:

9000 years of urushi in Japan

Urushi as a material

Fascination with urushi in the West

[web-site](#)

Kishu Lacquerware

[web-site](#)

Kishu Lacquerware: Traditional Craftsman

Featuring three Kishu lacquerware crafts people: Tanioka Toshifumi, Hayashi Katsuhiko, and Tanioka Kumiko, with pages introducing their works and lacquering processes

[web-site](#)

Kogei Japan: Traditional Crafts of Japan

Bilingual Japanese-English website of Kogei Japan: Traditional Crafts of Japan; it gives details of 235 craft enterprises designated, beginning in 1974, by METI (Japanese Ministry of Economy, Trade and Industry); 23 of these are types of lacquerware; extensive information is given about the history and methods of production of each craft enterprise; although the links provided for the 23 lacquer enterprises are, with the exception of Kishu lacquerware and Joboji lacquerware, to Japanese-only websites, they are all copiously illustrated and warrant visiting

[web-site](#)

Lacquer Reading List

Titles about Japanese, Chinese, and Korean lacquer work (publications up to 2005)

[web-site](#)

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WWW-Sites **Museum of Lacquer Art Münster**
Bilingual German-English website of the Museum für Lackkunst (Museum of Lacquer Art) in Münster; this is the only museum in Europe devoted solely to lacquer in its broad sense; the collection comprises objects made in China, Japan, Korea, Europe, and the Islamic world; featuring a compact glossary
[web-site](#)

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Plain lacquering with Joboji Urushi
[web-site](#) Japanese

Set of Six Sample Boards and Frames
Images and descriptions explaining the stages in the recreation of a *hiramaki-e* and *takamaki-e* design of a 19th century Japanese lacquer display cabinet; made for the Victoria and Albert Museum by the Mejiro Institute of Urushi Research and Restoration with support from the Toshiba International Foundation TIFO
[web-site](#)

Suzanne Ross Urushi
British lacquer artist who trained and lives in Wajima; includes three helpful reference sections:
Care Instructions
Urushi FAQs
Glossary
[web-site](#)

The Mazarin Chest
Bilingual English-Japanese pages about the the conservation of the Victoria and Albert Museum's Mazarin Chest and Mazarin Chest Project; includes four associated bibliographies (publications up to 2011):
Mazarin Chest Project related
Conservation
Science
Art History
[web-site](#)

The World Heritage Nikko Toshogu x Joboji Urushi
Video of Joboji urushi being used for the conservation of the Yomeimon Gate of the Nikko Toshogu Shrine
[web-site](#)

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Glossary **Mazarin Chest**

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One of the finest pieces of Japanese export lacquer from the second quarter of the 17th century. The chest was manufactured in Kyoto and was shipped to Amsterdam by the Dutch East India Company in 1643. It was first owned by Cardinal Jules Mazarin (1602-1661), the chief minister to Kings Louis XIII and Louis XIV of France. It was acquired by the Victoria and Albert Museum in 1882.

[web-site](#)

Murose Kazumi (1950-)

Urushi lacquer artist specialising in the maki-e technique. Designated an Important Intangible Cultural Property (Living National Treasure) by the Japanese government in 2008. Founder of the Mejiro Institute of Urushi Research and Restoration, Tokyo. Murose has given advice to the Victoria and Albert Museum for many years. His most recent collaboration with the museum is the creation of a dedicated space for the conservation of East Asian lacquer in a new storage and research facility scheduled to open in east London in 2024.

[web-site](#)

The Toshiba Gallery of Japanese Art

The UK's first permanent museum gallery dedicated exclusively to Japanese art and design that opened at the Victoria and Albert Museum in December 1986. A major programme of renewal and display was implemented between 2013 and 2015, with increased space devoted to modern and contemporary Japan.

[web-site](#)

Urushi

Japanese term for the sap of the *Toxicodendron vernicifluum*, a deciduous, broadleaf tree of the sumac or Anacardiaceae family found in China, Japan, and Korea. Its main constituent is a naturally occurring oleoresin called urushiol, which polymerises into a hard and durable plastic-like substance when exposed to moisture and air at an appropriate temperature.

Comprehensive bilingual glossaries of technical terms (Japanese-English and Japanese-Spanish) have been published by the Mejiro Institute of Urushi Research and Restoration, Tokyo.

[web-site](#)

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*Japanese names are given in the order of surname/given name while all other names follow the given name/surname pattern