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¹ROHOTCHENKO O. O., ²SHMAHALO R. T., ³KONOVALOVA O. V.,
⁴YUR M. V., ³RUDENCHENKO A. A.

¹*Institute of Contemporary Art Problems of the National Academy of Arts of Ukraine, Kyiv, Ukraine*

²*Lviv National Academy of Arts, Lviv, Ukraine*

³*Borys Grinchenko Kyiv University, Kyiv, Ukraine*

⁴*Mykhailo Boichuk Kyiv State Academy of Decorative Applied Arts and Design, Kyiv, Ukraine*

AUSTRALIAN OPALS IN THE WORKS OF MODERN UKRAINIAN JEWELLER MAKSYM STOLIAR

Purpose. *The study is devoted to the art historical understanding of the specifics of the use of Australian opals in the jewelry design of by the modern Ukrainian goldsmith Maksym Stoliar.*

Methodology. *The work uses art history and artistic and design scientific approaches in combination with comparative and presentation methods.*

Results. *The article analyses the physical and chemical properties, color range, places of extraction, cutting methods and basic principles of using Australian opals in the design and manufacture of jewelry by the modern Ukrainian goldsmith Maksym Stoliar. The specifics of the formation of the style of the works of this master are highlighted. The analysis of the combination of techniques and materials in the process of creating a master model of products is carried out.*

Scientific novelty. *The creative path of the national artist and goldsmith Maksym Stoliar is highlighted. The issues of artistic features, stylistics, subject and thematic orientation in the design of his author's jewelry with Australian opals are revealed. The means of further qualitative development and presentation of domestic goldsmithery in the world are characterised. The peculiarities of designing and manufacturing master models for fantasy forms of cutting Australian opals are clarified.*

Practical significance. *The materials of this study can be reflected in the writing of academic disciplines related to jewelry design. As a source of inspiration, the information provided can be used in the process of creating collections of exclusive jewels.*

Keywords: *Australian opal; goldsmith; technology and design; jewelry art of Ukraine; Maksym Stoliar.*

Introduction. Over the past twenty years, the domestic jewelry industry has been experiencing a significant increase in interest in the use of opals of Australian origin in the manufacture of exclusive author products. This mineraloid has been known since the times of Antiquity and the Middle Ages, and today it is rapidly gaining popularity in the modern domestic goldsmith industry and has broad prospects for development in decorative and applied arts. Today, new methods and techniques of working with opals are being mastered, and their processing is being improved. Accordingly, the range of materials and methods of shaping is expanding, which gives jewelry designers more room to work. At the same time, the creativity of Ukrainian goldsmith who working with Australian opals remains insufficiently studied.

Analysis of the previous research.

Among the latest fundamental studies that constitute an important primary source for covering the development of contemporary jewelry art in Ukraine, it is worth noting the two-volume textbook by Doctor of Art History, Professor R. Shmahalo, published in Lviv in 2015. Its first volume, entitled «World and Ukrainian Art Metal», contains important theoretical and practical information, in particular about precious minerals used in contemporary jewelry [6].

Another necessary professional source of information for this study is the «Dictionary of Gems and Gemology» by Professor M. Manutchehr-Danai, published in 2009 in Berlin [9].

A significant work for the study of opals of Australian origin is «The Opal Book» by

F.°Leechman, which, among other things, contains information on other world deposits, and the specifics of opal mining and processing [8].

For a qualitative analysis of the artistic technologies used in working with opals, it is important to read E. Brepohl's monography «Theorie und Praxis des Goldschmieds». The book covers a wide range of issues related to the processing of metal and non-metal materials in jewelry, in particular, methods of processing precious stones [7].

It is worth noting that Maksym Stoliar's artworks was first highlighted at the 2019 Annual Scientific and Practical Conference held at the Treasury of the National Museum of History of Ukraine in Kyiv. The report was prepared by O. Barbalat, a researcher at Borys Grinchenko Kyiv University, a lecturer in contemporary jewelry art [2]. It is worth noting that modern domestic studies of the peculiarities of the use of Australian opals in the works of Ukrainian goldsmiths are in the initial stages of development.

Problem statement. Given the analysis of previous scientific works, there is a need to study the specifics of the use of Australian opals in creativity of Ukrainian jewelry artists. The artworks of modern domestic goldsmith Maksym Stoliar was chosen as the basis of this research.

The results of the research and their discussion. Today, opal is the «business card» of Australia, as 95% of products currently on the world market are of Australian origin. This mineral was discovered in the Southern continent in the late 1880s. Australian opals appeared on the global market in the 1890s. By that time, deposits of this mineraloid were known in Hungary and South America [8, p. 15].

It is worth noting that opals are mined in Ukraine: in Volyn, Zhytomyr, Kyiv, Vinnytsia, Cherkasy, Dnipro regions, in the Azov Sea near the village of Katerynivka and in the Crimea [6,°p.°252].

The name of the gem comes from the Latin word opalus and the Greek οπάλιο, which in turn was formed from the Sanskrit word upala, meaning «precious stone» and indicating that this mineral came to Europe from India [9, p. 735]. Opal is a silica hydrate that has been released from aqueous solutions, so it appears in the form of flow formations, stalactites, etc. The mineral has a wide range of colors – from milky white to multi-colored and brown. Opal has been used in jewelry since ancient Greece and Rome [6, p. 252].

This stone is a mineraloid. It is an amorphous structure of quartz. It is distinguished from a mineral by the absence of a crystal lattice. An important feature of opal is the presence of a large amount of water in its composition, the content of which varies in different types from 5 to 30%. Its chemical formula is $\text{SiO}_2\text{-nH}_2\text{O}$. Some of these stones were formed from thermal springs and geysers [7, p. 35].

The hardness of opal on the Mohs Hardness Scale is 5–5.5. This suggests that the stone is quite fragile and can crack when hit and undergo other mechanical stress. Scratches easily appear on its surface. Currently, most precious opals come from Australia. The deposits in this country are famous for their unique finds of inimitable beauty. Mineraloids of Australian origin have the best opalescence effect, which is formed when light hits them and looks like an iridescent shimmer. Most opals are cut and polished to form a cabochon. «Natural» opal refers to polished stones that are composed entirely of precious opal.

Individual mineraloids are too thin. In this case, they are combined with other materials to form a «composite» gem. For example, doublets and triplets. The first consists of a relatively thin layer of precious opal, which is covered with a layer of dark material, most often ordinary black opal, onyx or obsidian. The second variant is similar to the doublet, but has a third layer – a domed cap

made of transparent quartz or plastic on top as a protective layer for the opal, which acts as a lens, enhancing the play of colors of the mineraloid [8, p. 48].

Since these stone contain a significant amount of moisture, jewelry made of them requires careful maintenance. First of all, it is recommended to wear them often, as opal absorbs moisture from the air and the wearer's body. It is better to store the items in a damp cloth. It is not recommended to keep opals in a room with dry air. Do not immerse doublet and triplets in water at all, so as not to disturb the density of the connection between the layers. It is recommended to clean the products only with mild agents without aggressive components.

In contemporary Ukrainian jewelry, only a few craftsmen work with Australian opals, one of them being Maksym Stoliar. He was born in 1974 in Kyiv to a family of engineers. From 1986 to 1990, he studied at the Art School No. 4 in his hometown. In 1990, he began his creative career by entering the Kyiv Art and Industrial College, Faculty of Metal Art Processing [2, p. 557]. Now this educational institution has acquired the status of the Mykhailo Boichuk Kyiv State Academy of Decorative and Applied Arts and Design.

In 1995, the master successfully defended his diploma in «Pectoral Orthodox Cross», which was made under the supervision of V. Tarasenko. In the decoration of this jewelry piece, M. Stoliar for the first time used black cabochon-cut opals and a central insert of synthetic opal with the effect of opalescence – iridescent radiance. Among other things, in this work, the master artist successfully combined the techniques of artistic wax modelling and silver casting from a molten model with the latest photographic etching technologies of the time. The shine of silver combined with the lustre of gilding and opalescence of the mineraloid created the effect of the so-called «colored radiance», which in the Byzantine and Kyivan Rus goldsmithing traditions was

associated with the Sun, the Kingdom of Heaven [1, P. 17, [4].

In the 1990s, the strong development of Ukrainian goldsmithery required the latest design solutions. Along with mass producers, firms appeared on the domestic market, which later occupied the niche of creating exclusive works of jewelry art. One of these companies was Fial LTD, where M. Stoliar worked as a master artist since 1995. During his active work at this company, launched the first author's conceptual collection of decorative and applied jewelry boxes «Trilobite», «Beetle», «Scorpion» [2, P. 558]. Their decor was generated by bionic motifs in the author's stylization. From 1996 to 1997, during M. Stoliar's studies at the Lviv National Academy of Arts at the Faculty of Metal Art Processing, new models of caskets were created using black Australian opals [2, P. 558]. At the same time, the artist's individual style and mastery of execution of works were being engraved and improved, which later influenced the work of many jewelers of the 2000s.

In the 2000s, M. Stoliar launched a new series of caskets: «East» and «Pyramid». The most famous of them are the «Hotei» and «Philosopher on a Turtle» caskets. From the Pyramids series, the Tetragonal Bipyramid became a popular model, the essence of which is to actively promote a three-dimensional chamber composition on man, space, matter and the subtle energy plane. This effect is significantly enhanced by the use of black opals and precious metals. This work is made of mahogany, with a white gold top inlaid with diamonds and a special base – a carriage inlaid with black Australian opals, which is intended to transform the energy field. The piece was made in 2002 and is now in a private collection [2, p. 562].

Among other things, Maksym is fascinated by sacred geometry as a means of cognizing the Divine and a method of realizing earthly existence. The techniques of sacred geometry are a complex of spiritual teaching systems, ancient and modern, that guide a

person on the path of finding a unique connection with the source of all things, with the Lord. The purpose of such practices is to acquire integrity, responsibility for one's own actions, unity and consciousness in the relation of the Divine to the human during earthly life.

Practical methods of sacred geometry, as a science that goes hand in hand with spirituality and is used by designers in the creation of jewelry, allow:

- support us in a state of awareness of who we are, where we came from and why we are here;

- teach us to reflect deeply on the mysteries of existence and the means of achieving spiritual perfection;

- refer to ancient and modern knowledge about spiritual dimensions that provide the possibility of balance at all levels of existence;

- endow the soul with responsibility for actions, compassion, and love;

In sacred geometry, triangles have sides $3/4/5$, $5/12/13$, and $7/24/25$. The above-mentioned works of M. Stoliar, in particular, the pyramids, usually contain several such triangles made of black opals. The figure with sides $3/4/5$ is in the so-called Pharaoh's chamber. The great pyramid itself, with these triangles, creates an intense choral field that destroys germs and promotes mummification. There is a mystical connection between the shape of the pyramid itself and the physical, chemical, and biological processes taking place inside. By consciously selecting the size of the triangles and the internal shape of the pyramid, it is possible to control these processes, slowing or speeding them up.

In general, Australian opals appeared on the domestic market in a wide range in the 2000s. Therefore, it took the master many years to hone his skills in working with these incredibly bright but specific mineraloids. The process of working with opals is always a risk, and in addition to professional practical skills, it requires special concentration and considerable spiritual effort from the master.

Each piece is made in a single copy, as even a pair of identical cabochons for a set is quite difficult to find. For example, the «Golden Fish» earrings (Fig. 4) are made of Australian cabochon-cut opals, which have different patterns but complement each other. In this case, M. Stoliar successfully applied asymmetry in the composition, and the bionic motifs characteristic of the style of his works associatively resemble coral reefs and the wavy surface of the sea. This technique is applied to the artistic solution of the brooch «Legend of the Galaxy», the dominant element in the asymmetrical solution of which is also an Australian cabochon-cut opal (Fig. 3). Usually, M. Stoliar creates wax models for such jewelry by hand modelling them from special wax, which is then melted out of the mold for molded parts during the casting process. This method of making jewelry is called lost-wax casting. It involves the creation of a single piece of goldsmithery, which makes such jewels have the status of exclusive works of art.

Magical opals fascinate the master artist, especially samples of fantasy shapes that require modelling on the most complex surface of the mineraloid (Fig. 1). Working with such opals of the so-called polished «natural» form is more difficult and risky than with cabochons in doubles and triplets. In this case, the shape gives rise to a fancy decor, but, given the information given above that opals do not react well to temperature changes, it is often necessary to first create a fancy shape like a stone that has been used in the work from another heat-resistant material and wax it. Thus, a master model is created in a single copy, and a piece with a fancy-shaped opal is considered unique (Fig. 2).

Among other things, it is worth noting that the key element of Maxim Stolyar's jewelry design is the spiral, a symbol of vital energy that is a magical red thread that spirals through the entire creative path of the master artist.

The preliminary design of the prize for the winner of the Eurovision Song Contest

2005 was also created during his work as a design artist at the Kyiv Jewelry Factory. In an interview with the newspaper «Fakty», Maksym says the following: («<...> – Four artists, including me, were encouraged to make sketches. Each of us prepared our own versions (there were about twenty of them in total). The customer chose my version – a fern

leaf twisted in a spiral, symbolizing the movement of the galaxy in the Universe – <...>»). The prize was made of 585° gold, the most expensive in the 50-year history of the contest, and was presented by former Ukrainian President Viktor Yushchenko to the winner, Helena Paparizou [2, p. 563].



Fig. 1. M. Stoliar. «Adelaide» ring. Wax master model demonstrating the principle of modelling on the fancy surface of opal, 2017. Private collection, Kyiv, Ukraine



Fig. 2. M. Stoliar. «Adelaide» ring. Gold 585°, Australian opals. 2017. Private collection, Kyiv, Ukraine



Fig. 3. M. Stoliar. «Legend of the Galaxy» brooch. Gold 585°, diamonds, Australian opals. 2016. Private collection, Kyiv, Ukraine



Fig. 4. M. Stoliar. «Golden fish» earrings. Gold 585°, emeralds, Australian opals. 2015. Private collection, Kyiv, Ukraine

In 2013, M. Stoliar was solemnly awarded the Minor Order of M. Perkhin (an honorary award of the Carl Faberge Memorial Foundation) for his outstanding achievements in the development of jewelry art in Ukraine since independence [6].

Since 2014, the master has been working in his own studio together with his wife, an

artist-enameller, O. Barbalat. He is actively engaged in exhibition activities and creates jewelry with Australian opals and hot enamel. In parallel with his own creative activity, M. Stoliar works as a curator of the jewelry workshop at Borys Grinchenko Kyiv University and has a large number of students and followers.

Maksym Stoliar is a regular participant in specialized jewelry art exhibitions. Among the most significant recent events for the master is participation in the jewelry exhibition «A Fragile Moment Touches Eternity», which was organized in the exhibition hall of the Treasury of National Museum of the History of Ukraine in 2018. At this exhibition, a ring from the «Morena» series was presented, in the creation of which Australian opals were used, and the composition of the work itself was built around a spiral.

Among other things, it is worth paying attention to the fact that in the process of artistic design of products, the master performs special calculations based on the methods and principles of sacred geometry. The construction of the shapes of the vast majority of his sketches is based on the symbol of the Flower of Life, which represents Divine consciousness and spirals. These symbols, which have been used by goldsmiths of different countries since ancient times, help to create a positive energy attitude of the owner of the product, as such jewelry works on a subatomic level. It is also worth noting that the goldsmith's works, made using the magical properties of signs and symbols of sacred geometry in combination with the energetic properties of Australian opals, help to restore

weakened cells of the body, and adjust the owner's energy field to positive vibrations.

He is an extremely talented person who, at first glance, lives an ordinary life, but follows a rather unusual path. The master artist's work harmoniously combines science and spirituality – allies in the creation of exclusive author's jewelry, in particular with Australian opals.

Conclusions. Using the example of the works of the modern master and artist Maksym Stoliar, the main properties of opals, particularly those of the Australian deposit, were analyzed and the main methods of their cutting were highlighted using in modern Ukrainian goldsmithery. The main methods of using these mineraloids in the work of goldsmith M. Stoliar, who harmoniously and consciously combines form and content in the design of his own jewelry, emphasizing the novelty of the plastic solutions of his own works, are described. It was found that the work of this master has a powerful influence on the formation of artistic and stylistic features of jewelry design in Ukraine. The results of the works of this goldsmith and jewelry designer are a powerful impulse, an interesting experience and an inexhaustible source of inspiration for modern designers and goldsmiths.

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АВСТРАЛІЙСЬКІ ОПАЛИ У ТВОРЧОСТІ СУЧАСНОГО УКРАЇНСЬКОГО ЮВЕЛІРА МАКСИМА СТОЛЯРА

¹РОГОТЧЕНКО О.О., ²ШМАГАЛО Р.ОТ., ³КОНОВАЛОВА О.О.В.,
⁴ЮРМ.О.В., ³РУДЕНЧЕНКО А.А.

¹Інститут проблем сучасного мистецтва Національної академії мистецтв України, Київ, Україна

²Львівська національна академія мистецтв, Львів, Україна

³Київський університет імені Бориса Грінченка, Київ, Україна

⁴Київська державна академія декоративно-прикладного мистецтва і дизайну імені Михайла Бойчука, Київ, Україна

Метою статті є дослідження, присвячене мистецтвознавчому осмисленню специфіки застосування австралійських опалів у дизайні ювелірних виробів сучасного вітчизняного художника-ювеліра Максима Столяра.

Методологія. У роботі застосовано мистецтвознавчий і художньо-дизайнерський наукові підходи у поєднанні з порівняльним і презентаційним методами.

Результати. Проаналізовано фізико-хімічні властивості, колірну гаму, місця видобутку, способи огранки й основні засади застосування австралійських опалів у дизайні та виготовленні ювелірних прикрас сучасного українського ювеліра Максима Столяра. Висвітлено специфіку формування стилістики творів зазначеного майстра. Здійснено аналіз поєднання технік виконання і матеріалів у процесі створення майстер-моделі виробів.

Наукова новизна. Висвітлено творчий шлях вітчизняного художника-ювеліра Максима Столяра. Розкрито питання художніх особливостей, стилістики, предметно-тематичної спрямованості у дизайні його авторських ювелірних виробів з австралійськими опалами. Охарактеризовано засоби подальшого якісного розвитку і презентації вітчизняного золотарства у світі. Уточнено особливості проектування і виготовлення майстер-моделей під фантазійні форми огранки австралійських опалів.

Практична значущість. Матеріали даного дослідження можуть знайти відображення у написанні навчальних дисциплін, пов'язаних з дизайном ювелірних виробів. В якості джерела інспірацій надана інформація може бути застосована у процесі створення колекцій ексклюзивних авторських прикрас.

Ключові слова: австралійський опал; золотарство; технологія і дизайн; ювелірне мистецтво України; Максим Столяр.

ІНФОРМАЦІЯ
ПРО АВТОРІВ:

Роготченко Олексій Олексійович д-р мист., професор, головний науковий співробітник, Інститут проблем сучасного мистецтва Національної академії мистецтв України, ORCID 0000-0003-4631-8260, **e-mail:** rogotchenko2007@ukr.net

Шмагало Ростислав Тарасович, д-р мист., професор, професор кафедри історії та теорії мистецтва, Львівська національна академія мистецтв, ORCID 0000-0002-9853-8989, **e-mail:** shmahalo@hotmail.com

Коновалова Ольга Володимирівна, канд. мист., доцент кафедри образотворчого мистецтва і дизайну, Київський університет імені Бориса Грінченка, ORCID 0000-0002-1782-4757, **e-mail:** o.konovalova@kubg.edu.ua

Юр Марина Володимирівна, д-р мист., старший науковий співробітник, проректор з наукової та міжнародної діяльності, Київська державна академія декоративно-прикладного мистецтва і дизайну імені Михайла Бойчука, ORCID 0000-0003-3487-1480, **e-mail:** yurmaryna@gmail.com

Руденченко Алла Андріївна, д-р пед. наук, професор, завідувач кафедри декоративного мистецтва і реставрації Факультету образотворчого мистецтва і дизайну Київського університету імені Бориса Грінченка, ORCID 000-0001-9354-8216, **e-mail:** a.rudenchenko@kubg.edu.ua

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