

O C H

R O N

A nr 1 Z A

B 2023 Y T

K Ö W

1 (282) LXXVI

Olga Ryzhova*

Inna Ivakina**

Painting on metal in the art culture of Kyiv: history, collections, stylistics, technique and technology of paintings

Malarstwo na metalu w kulturze artystycznej Kijowa – historia, zbiory, stylistyka, technika i technologia obrazów

Olga Ryzhova, Inna Ivakina, *Painting on metal in the art culture of Kyiv: history, collections, stylistics, technique and technology of paintings*, „Ochrona Zabytków” 2023, nr 1, s. 131–162.

Abstract

The article is a review of Kyiv paintings on metal supports dating from the end of the seventeenth to the first quarter of the twentieth century. The review of the surviving artworks includes both iconostasis complexes *in situ* and icons and paintings, once removed from ensembles and preserved in the central Kyiv museum collections: the National ‘Kyiv-Pechersk Lavra’ Preserve and the National Art Museum of Ukraine. The selection criteria for the study were based on documentary evidence (mainly archival and bibliographic) that the artworks belonged to Kyiv. As a result of this comprehensive study on the paintings on metal supports in Kyiv and Kyiv collections, these artworks acquire the status of a reference base and become available for a wide range of researchers.

Keywords

Painting on metal support, Kyiv, Ukraine, history, stylistics, technique, technology

Abstrakt

Artykuł stanowi przegląd kijowskiego malarstwa na metalowych podłożach datowanego od końca XVII do pierwszej ćwierci XX wieku. Analiza zachowanych dzieł sztuki obejmuje zarówno zespoły ikonostasów *in situ*, jak i ikony czy obrazy, które zostały

* Doctor of Art History, Leading Investigator of the Department of Scientific Restoration and Conservation of Moving Monuments of the National Preserve “Kyiv-Pechersk Lavra”, Kyiv, Ukraine, first category restorer of paintings
ORCID: 0000-0003-2270-9419

** Head of the Department for the Protection of Monuments of Fine Arts, Books and Documents of the National Preserve “Kyiv-Pechersk Lavra”, Kyiv, Ukraine

usunięte z zespołów i włączone do głównych kolekcji muzealnych Kijowa: Narodowego Rezerwatu „Ławra Kijowsko-Pieczerska” i Narodowego Muzeum Sztuki Ukrainy. Kryterium wyboru obiektów do badań była ich przynależność do Kijowa potwierdzona dokumentami (głównie archiwalnymi i bibliograficznymi). W wyniku kompleksowego badania kijowskiego malarstwa na metalowych podłożach oraz kijowskiej kolekcji, badane dzieła zyskują status bazy referencyjnej i stają się dostępne dla szerokiego grona badaczy.

Słowa kluczowe

malarstwo na metalowym podłożu, Kijów, Ukraina, historia, stylistyka, technika, technologia

Introduction. Outline of the problem

Researchers link the genesis of the European tradition of painting on metal supports to the art of enamelling and engraving in the fifteenth and sixteenth centuries; it is thought that working with copper sheets encouraged painters, who were often involved in both engravings and enamels, to adapt copper sheets for working on them with oil paints and tempera.¹ The earliest surviving works that are remembered by contemporaries are small copperplate paintings by Sebastiano del Piombo (1485–1547) and Annibale Carracci (1560–1609); from this time onwards Italy became a major artistic centre where painting on metal supports was actively developed and copper became a popular support.² The use of metal supports for painting by northern European craftsmen was recorded in the sixteenth century, and in France and Spain in the seventeenth and eighteenth centuries;³ Polish funerary portraits made on copper and lead-tin plates, decorated with profiled frames and embossed ornaments, date back to the second half of the seventeenth century;⁴ in Russia, in 1670, Bogdan Soltanov, an iconographer for Tsar Alexei Mikhailovich, executed two copper icons – an image of the Saviour and the Mother of God.⁵

The Kyiv tradition of painting on metal, along with the tradition of painting on wood and canvas, can be traced from written sources to as early as the middle of the seventeenth century (1650). Archdeacon Paul of Aleppo, on his journey to Kyiv, describes the ‘full-length portraits of the patriarchs on canvas’ which he saw from the metropolitan chambers in the basement of the Saint Sophia Cathedral in Kyiv,⁶ images of ‘angels and saints [...] whose faces [...] are white and whose vestments are covered with gilding’ and ‘made of thin iron sheets with fasteners’ in one of the side altars of the St Sophia Cathedral;⁷ ‘an icon of the Lord at the gates of the altar’ from the iconostasis of the Cathedral of the Assumption, where the book (the Gospel) of the Lord is ‘of forged silver, and the writing is gold’;⁸ a temple icon depicting St Michael in military attire from St Michael’s Cathedral, where ‘the armour, arms, cuffs, platband and helmet are all of pure silver, and the protuberances and other things are gilded.’⁹ Summarizing what Paul of Aleppo saw, it is

¹ Yuri Grenberg, *Ot fayumskogo portreta do postimpressionizma. Istoriya tekhnologii stankovoi zhivopisi*, Moscow 2003, p. 65.

² *Ibid.*, pp. 65–66.

³ *Ibid.*, pp. 66–67.

⁴ L. Tananaeva, *Sarmatskii portret. Iz istorii pol'skogo portreta epokhi barokko*, Moscow 1979, pp. 201–214, fig., *ibid.*, pp. 296–297, figs. 71–83.

⁵ Olga P. Posternak, ‘Religioznaya zhivopis’ na metalle: istoriya i tekhnologiya’, in: *Tekhniki i tekhnologii v sakral'nom iskusstve. Khristianskii mir. Ot drevnosti k sovremennosti*, ed., Anna W. Ryndina, Moscow 2012, pp. 142.

⁶ Paweł Aleppski, arkhidiakon, *Puteshestvie Antiokhijskogo patriarkha Makariya v Rossiyu v polovine XVII veka, opisannoe ego synom, arkhidiakonom Pavlom Aleppskim (po rukopisi Moskovskogo glavnogo arkhiva Ministerstva inostrannykh del)*, trans. by G. Murkos, vol. 2, *Ot Dnestra do Moskvý*, Moscow 1897, p. 186.

⁷ *Ibid.*, p. 72.

⁸ *Ibid.*, p. 51.

⁹ *Ibid.*, p. 73.



1 Icon *The Christ Hierarch with Appearing Saints John Chrysostom and Basil the Great*, 1690, from the iconostasis of the underground church of St Barlaam of Pechersk of the Kyiv Cave Monastery. Photo O. Ryzhova

Ikona Chrystus Hierarcha z postaciami Świętych Jana Chryzostoma (Złotoustego) i Bazylego Wielkiego, 1690, fragment ikonostasu podziemnej cerkwi Świętego Warłaama Peczerskiego w Ławrze Peczerskiej w Kijowie. Fot. O. Ryzhova

2 Icon *The Mother of God of Pechersk with Appearing Saints Anthony and Theodosius of Pechersk*, 1690, from the iconostasis of the underground church of St Barlaam of Pechersk of the Kyiv Cave Monastery. Photo O. Ryzhova

Ikona Matka Boża Peczerska ze Świętymi Antonim i Teodozjuszem Peczerskimi, 1690, fragment ikonostasu podziemnej cerkwi Świętego Warłaama Peczerskiego w Ławrze Peczerskiej w Kijowie. Fot. O. Ryzhova

possible to speak about the artistic tradition of painting on canvas and metal, which had already developed in Kyiv by the middle of the seventeenth century (1650).

The surviving icons on copper supports dated to the seventeenth century from the local tier of the old carved wooden iconostasis of 1691 (the iconostasis itself has not survived) of the cave church of St Barlaam of Pechersk in the Near Caves (St Anthony's) of the Kyiv-Pechersk Lavra include: *The Christ Hierarch with Appearing Saints John Chrysostom and Basil the Great*; *The Mother of God of Pechersk with Appearing Saints Anthony and Theodosius of Pechersk*; *The Venerable Barlaam, Hegumen of Pechersk with Scenes from his Life*; and *The Venerable Barlaam of Khutyn, The Holy Martyr John the Warrior and the Venerable Barlaam of Pechersk*¹⁰ (figs. 1–4), mounted

¹⁰ Olga Ryzhova, *Ikony u khudozhnij kul'turi Kyjewa kintsya XVII–XVIII stolit'*, WPC Kyjiwskij uniwersytet, Kyiv 2020, pp. 104–116.



on the northern wall of the church's *solea*. The icons from the iconostasis of the underground church of St Barlaam of Pechersk are included in the study for several reasons: firstly, the icons are directly related to the subject of the work, in other words, they are painted on metal, were most likely created in the workshops of the Kyiv-Pechersk Lavra, are dated, and are in situ in the church; secondly, they are the earliest in the chronological series presented in the present study, and their inclusion is extremely important as a 'point of reference'.

The seventeenth-century painting tradition in both technology and style is joined by icons on copper from the 1700 iconostasis of the Church of the Exaltation of the Holy Cross in the Near Caves¹¹ – *Christ the Almighty*, 1700;¹² *Our Lady Hodegetria*, 1700;¹³ *Exaltation of the Holy Cross*, 1700;¹⁴ *The Venerable Anthony of Pechersk*, 1700,¹⁵ and *The Venerable Theodosius of Pechersk*, 1700,¹⁶ (figs. 5–9). The images from the Church of St Barlaam of Pechersk and the Church of the Exaltation of the Holy Cross are characterized by static, dense forms, as well as balanced and simple compositions. The faces of Christ, the Virgin and the saints have a certain physiognomy – a regular, slightly elongated and somewhat narrowed downwards facial oval; the eyes are shaped like large rounded olives; the eyeballs framed by the dense, accentuated white-washed strokes of the eyelids; the eyebrows have regular arched contours and repeat the shape of the eyelids, a regular, slightly downwardly elongated 'Grecian' nose, where the bridge of the nose is barely marked by shading; plump, compactly shaped lips and characteristically shaped earflaps.

¹¹ Ibid., pp. 116–133.

¹² 136.5 × 81.5 × 0.2. copper, embossing, amalgam gilding, primer, oil technique. KPL-Zh-1679

¹³ 139.5 × 93 × 0.2. copper, embossing, amalgam gilding, primer, oil technique. KPL-Zh-1680

¹⁴ 117 × 76 × 0.2. copper, embossing, amalgam gilding, primer, oil technique. KPL-Zh-1673

¹⁵ 115.5 × 65 × 0.1. copper, embossing, amalgam gilding, primer, oil technique. KPL-Zh-1678

¹⁶ 116.5 × 65 × 0.1. copper, embossing, amalgam gilding, primer, oil technique. KPL-Zh-1677



3 Icon *The Venerable Barlaam, Hegumen of Pechersk with Scenes from his Life*, 1690, from the iconostasis of the underground church of St Barlaam of Pechersk of the Kyiv Cave Monastery. Photo O. Ryzhova

Ikona *Czczigodny Warłaam, Ihumen peczerski ze scenami z życia*, 1690, fragment ikonostasu podziemnej cerkwi Świętego Warłaama Peczerskiego w Ławrze Peczerskiej w Kijowie. Fot. O. Ryzhova

4 Icon *The Venerable Barlaam of Khutyn, the Holy Martyr John the Warrior and the Venerable Barlaam of Pechersk*, 1690, from the iconostasis of the underground church of St Barlaam of Pechersk of the Kyiv Cave Monastery. Photo O. Ryzhova

Ikona *Czczigodny Warłaam Chutyński, Święty Męczennik Jan Wojownik i Czczigodny Warłaam Peczerski*, 1690, fragment ikonostasu podziemnej cerkwi Świętego Warłaama Peczerskiego w Ławrze Peczerskiej w Kijowie. Fot. O. Ryzhova

5 Icon *Christ the Almighty*, 1700, from the iconostasis of the Church of the Exaltation of the Cross in the Near Caves of the Kyiv Cave Monastery. Photo S. Polyushko

Ikona *Chrystus Wszchemogący*, 1700, fragment ikonostasu cerkwi Podwyższenia Krzyża Pańskiego w Bliskich Pieczarach Ławry Peczerskiej w Kijowie. Fot. S. Polyushko

6 Icon *Our Lady Hodegetria*, 1700, from the iconostasis of the Church of the Exaltation of the Cross in the Near Caves of the Kyiv Cave Monastery. Photo S. Polyushko

Ikona *Matka Boża Hodegetria*, 1700, fragment ikonostasu cerkwi Podwyższenia Krzyża Pańskiego w Bliskich Pieczarach Ławry Peczerskiej w Kijowie. Fot. S. Polyushko



The volume of the light and shade modelling emphasizes the materiality of the form. This type is characteristic of Lavra painting.

The figurative medallion icons, inserts from the icon case of the Mother of God of the Assumption Cathedral¹⁷ – *The Archangels*¹⁸ (fig. 10); *Behold the Tabernacle of God, Behold the Men* (Depiction of the Cathedral of the Assumption of the Kyiv-Pechersk Lavra)¹⁹ (fig. 11); *Our Lady of Kupiatitsy*;²⁰ *God the Father*²¹ (fig. 12); *The Ascension of the Virgin Mary*,²² and *The Annunciation*²³ (fig. 13) are dated from the first quarter to the third quarter of the eighteenth century; all the icons were found in the 1970s during archaeological excavations in the ruins of the Cathedral of the Assumption.

¹⁷ Olga Ryzhova, 'Osoblyvosti ikonografii' zobrazen' na ikonakh z Uspens'kogo soboru Kyjevo-Pechers'koi' Svyato-Uspens'koi' Lavry', *Visnyk Derzhavnoi' akademii' kerivnykh kadrov kul'tury i mystetstv* 2015, no. 4, pp. 83–88; Anna A. Marchenko, 'Utochnennyya pokhodzhennyya ta atrybutsiya ryadu ikon z vivtarnykh chastyn Uspens'kogo soboru Kyjevo-Pechers'koi' lavry v kolektsii' Natsional'nogo Kyjevo-Pechers'kogo istoriko-kul'turnogo zapovidnyka', in: *Mogylyans'ki chytannya 2018 roku*, ed. V. Kolpakova [et al.], Kyiv 2018, pp. 152–158

¹⁸ Copper, primer, oil technique. 11.5 × 6 × 0.1, KPL-Zh-675; 11 × 5.5 × 0.1, KPL-Zh-746; 10 × 6.5 × 0.1, KPL-Zh-748; 9.5 × 6.5 × 0.1, KPL-Zh-747

¹⁹ 9 × 10.1 × 0.1, copper, primer, oil technique. KPL-Zh-674

²⁰ 16.4 × 15.5 × 0.1, copper, primer, oil technique. KPL-Zh-673

²¹ 17.5 × 9.2 × 0.1, copper, primer, oil technique. KPL-Zh-671

²² 19 × 19 × 0.1, copper, primer, oil technique. KPL-Zh-НДФ-2485

²³ 51 × 58 × 0.2, copper, primer, oil technique. KPL-Zh-2439

7

Icon *St Theodosius of the Caves*, 1700, from the iconostasis of the Church of the Exaltation of the Cross in the Near Caves of the Kyiv Cave Monastery. Photo S. Polyushko

Ikona *Święty Teodozjusz Peczerski*, 1700, fragment ikonostasu cerkwi Podwyższenia Krzyża Pańskiego w Bliskich Pieczarach Ławry Peczerskiej w Kijowie. Fot. S. Polyushko

8

Icon *St Anthony of the Caves*, 1700, from the iconostasis of the Church of the Exaltation of the Cross in the Near Caves of the Kyiv Cave Monastery. Photo S. Polyushko

Ikona *Święty Antoni Peczerski*, 1700, fragment ikonostasu w Bliskich Pieczarach Ławry Kijowsko-Pieczerskiej. Fot. S. Polyushko

9

Icon *Exaltation of the Holy Cross*, 1700, from the iconostasis of the Church of the Exaltation of the Cross in the Near Caves of the Kyiv Cave Monastery. Photo S. Polyushko

Ikona *Podwyższenie Krzyża Pańskiego*, 1700, fragment ikonostasu w Bliskich Pieczarach Ławry Peczerskiej w Kijowie. Fot. S. Polyushko



The second half of the eighteenth century is represented by a work of the Lavra icon painting school: the iconostasis (made of metal) in the Church of St Theodosius (1760–1762) at the Far Caves (St Theodosius's)²⁴ (fig. 14). The painting of the church's iconostasis was 'carried out by a group of "young men" from the Lavra icon painting workshop under the supervision of the head monk Vladimir.'²⁵ The style and technology of the Lavra school of icon painting on metal, observed in the examples from the late seventeenth century (1691), have not undergone significant changes: the copper, gilded iconostasis, decorated with embossing, shines like a precious frame. The painting is moderate in colouration – the dominant colour in the scheme is vermilion. The

²⁴ Olga Ryzhova, *Ikopypys u khudozhnij...*, op. cit., pp. 309–354.

²⁵ V Kolpakova, 'Pidzemna obitel', in: *Skarby Kyjevo-Pechers'koj' lavry*, ed. Olga Koval, Kyiv 1998, pp. 63–90. <https://violity.com/101634697-skarbi-kiyevo-pecherskoyi-lavri-albom-1998-god-tirazh-10-000> (accessed: 15/03/2023); Wasil A. Shydenko, 'Ikonostasj tserkvej, nakhodyashchikhsya v Dal'nikh peshcherakh Kievo-Pecherskoj Lavry', *Lavrskij al'manakh* 2009, no. 23, pp. 128–132.



10



11

iconography of the monument is typically 'Lavra': the images in the icons are from the 'Kunstbuch' icon painting workshop of the Kyiv-Pechersk Lavra.²⁶

The icons on metal from the high altar of the Church of the Exaltation of the Holy Cross in the Near Caves date back to the last quarter of the eighteenth century (1783); they include *The Deesis*, life-size images of *St Basil the Great*, *St Gregory the Evangelist*, *St John Chrysostom*, *St James the Apostle*, *the Lord's Brother*, and *The Crucifixion*;²⁷ the stylistics of the icons depicting the saints are based on the genre of church ceremonial portraiture; *The Deesis* and *The Crucifixion* are compositionally and pictorially closest to a religious painting (fig. 15).

A monument from the turn of the eighteenth to nineteenth centuries is the iconostasis of the Church of the Nativity (1801–1803) in the Far Caves²⁸ of the Kyiv-Pechersk Lavra (fig. 16). 'The iconostasis of copper gilded by fire' was installed in the church in January 1803. The modestly-sized iconostasis has three rows of icons. A 'pictorial' approach, which lacks the conventionality of form inherent in traditional icons, is a continuation of the stylistic trend that originated in the workshops of the Kyiv-Pechersk Lavra as early as in the middle of the second half of the seventeenth century – a painting tradition that had its own, parallel development next to traditional icon-painting. Narrative compositions, monumental forms and colouration based on traditional icon colours – gold, vermilion, whitewash, and ultramarine. The icons, while preserving the

²⁶ Olga Ryzhova, *Ikonopys u khudozhnij...*, op. cit., pp. 40–48.

²⁷ Anna A. Marchenko, 'Ikony na metali z vityarya Khrestovozdvyzhens'koi' tserkvy Kyjevo-Pechers'koi' lavry, in: *Muzei' ta restavratsiya u konteksti zberezheniya kul'turnoi' spadshchyny. Aktual'ni vyklyky suchasnosti. Proceedings of 4th International Scientific and Practical conference*, (Kyiv 2019, 6–7 March), ed. O. W. Rudnyk et al., Kyiv 2019, pp. 145–158.

²⁸ Olga Ryzhova, *Ikonopys u khudozhnij...*, op. cit., pp. 376–387.



12



13

10

Medallion icon *The Archangel*, first quarter of the 18th century, inserts from the icon case of the Mother of God of the Assumption Cathedral of the Kyiv Cave Monastery. Photo S. Polyushko

Medalion z ikoną *Archanioł*, pierwsza ćwierć XVIII wieku, eksponat z gabloty z ikonami Matki Bożej w soborze Zaśnięcia Bogurodzicy w Ławrze Peczerskiej w Kijowie. Fot. S. Polyushko

11

Medallion icon *Behold the Tabernacle of God, Behold the Men (Depiction of the Cathedral of the Assumption of the Kyiv-Pechersk Lavra)*, first quarter of the 18th century, inserts from the icon case of the Mother of God of the Assumption Cathedral of the Kyiv Cave Monastery. Photo S. Polyushko

Medalion z ikoną *Oto przybytek Boga wśród ludzi (Wizerunek Soboru Zaśnięcia Bogurodzicy w Ławrze Peczerskiej w Kijowie)*, pierwsza ćwierć XVIII wieku, eksponaty z gabloty z ikonami Matki Bożej w soborze Zaśnięcia Bogurodzicy w Ławrze Peczerskiej w Kijowie. Fot. S. Polyushko

12

Medallion icon *God the Father*, first quarter of the 18th century, inserts from the icon case of the Mother of God of the Assumption Cathedral of the Kyiv Cave Monastery. Photo S. Polyushko

Medalion z ikoną *Bóg Ojciec*, pierwsza ćwierć XVIII wieku, eksponaty z gabloty z ikonami Matki Bożej w soborze Zaśnięcia Bogurodzicy w Ławrze Peczerskiej w Kijowie. Fot. S. Polyushko

13

Medallion icon *The Annunciation*, first quarter of the 18th century, inserts from the icon case of the Mother of God of the Assumption Cathedral of the Kyiv Cave Monastery. Photo O. Ryzhova

Medalion z ikoną *Zwiastowanie*, pierwsza ćwierć XVIII wieku, eksponaty z gabloty z ikonami Matki Bożej w soborze Zaśnięcia Bogurodzicy w Ławrze Peczerskiej w Kijowie. Fot. O. Ryzhova



conventionality of the artistic language, are based on the pictorial principles of imagery, technique and technology, as close to the European painting style as possible,²⁹ and borrow certain formal techniques, mainly with regard to ornamentation, from the late Renaissance and Baroque.

The first half of the nineteenth century was marked by the construction of copper gilded iconostases in the underground churches of St Anthony of Pechersk (1809–1814), St Barlaam of Pechersk (1818) and The Entry of the Most Holy Theotokos into the Temple (1819) in the Near Caves of the Kyiv-Pechersk Lavra.³⁰

²⁹ Olga Ryzhova, 'Tekhnologichni osoblyvosti zhyvopysu ikon XVIII st. Kyjevs'kogo pokhodzhennya', *Visnyk Derzavnoi' akademii' kerivnykh kadriv kul'tury i mystetstv* 2012, no. 2, pp. 157–161. Olga Ryzhova, Wiera Raspopina, 'Ikonŷ Kieva XVIII veka iz kolektsii Natsional'nogo Kievo-Pecherskogo istoriko-kul'turnogo zapovednika. Issledovaniya i atributsiya, in: *Doslidzhennya, konservatsiya ta restavratsiya muzejnykh pam'yatok: dosyagnennya, tendentsii' rozvytku. Proceedings of 9th International Scientific and Practical Conference*, National Scientific Research and Restoration Center of Ukraine, Kyiv 2013, 27–31 May, pp. 333–335.

³⁰ Wasil A. Shydenko, 'Ikonostasŷ tserkvei...', op. cit., pp. 124–137; Ya. V. Lytvynenko, 'Peshchernŷe ikonostasŷ v svete arkhivnykh issledovaniŷ', in: *Tserkva – nauka – suspil'stvo: pytannya vzajemodii'.* *Proceedings of 10th International Scientific Conference*, National Scientific Research and Restoration Center of Ukraine, Kyiv 2012, 30 May – 1 June, pp. 181–184. Ya. V. Lytvynenko, 'Ikonostasyy i monumentalnyj zhyvopys lavrs'kykh pecher. Datuvannya, atrybutsiya, vtraty, ponovlennya', *Lavrs'kyj al'manakh* 2012, no. 27, pp. 306–337; Ya. V. Lytvynenko, 'Ikonostas tserkvy prepodobnogo Antoniia Pechers'kogo v Blyzhnikh pecherakh Kyjevo-Pechers'koi' lavry', *Pytannya istorii' nauky i tekhniky* 2018, no. 2, pp. 66–72.



14 The metallic iconostasis of the Church of St Theodosius (1760–1762) at the Far (Theodosius) Caves of the Kyiv Cave Monastery. Scanned from the book: *Skarby Kyjevo-Pechers'koi' lavry*, 1998

Metalowy ikonostas cerkwi Świętego Teodozjusza (1760–1762) w Dalekich Pieczarach Ławry Peczerskiej w Kijowie. Skan z albumu: *Skarby Kyjevo-Pecherskoi lavry*, Kijów 1998

15 The icons of the high altar of the Church of the Exaltation of the Holy Cross in the Near Caves of the Kyiv Cave Monastery: *The Deesis, St Basil the Great, St Gregory the Evangelist, St John Chrysostom, St James the Apostle, the Lord's Brother, The Crucifixion*, 1783. Scanned from the book: *Skarby Kyjevo-Pechers'koi' lavry*, 1998

Ikony ołtarza głównego cerkwi Podwyższenia Krzyża Świętego w Bliskich Pieczarach Ławry Peczerskiej w Kijowie: *Deesis, Święty Bazyli Wielki, Święty Grzegorz Ewangelista, Święty Jan Chryzostom, Święty Jakub Apostoł, Brat Pański, Ukrzyżowanie*, 1783. Skan z albumu: *Skarby Kyjevo-Pecherskoi lavry*, Kijów 1998

The iconostasis of the Church of St Anthony of Pechersk (1809–1814) was established 'with the blessing [...] of Metropolitan Serapion of Kyiv and Galicia.'³¹ The custodian of the iconostasis was 'Mr Pyotr Burnos, a resident of Ekaterinodar', who gave five thousand roubles towards its manufacture. It is known that the icons were painted by Leon Antonov, the metal work was executed by Zakhary Stepanovich Brezgunov and Anton Savitsky (the royal gate), 'supervision over the work' was entrusted to the head of the caves of the Cathedral elder, Hieromonk German

³¹ Wasil A. Shydenko, 'Ikonostas̄y tserkveï,....', op. cit., p. 147; Ja. W. Łytwynenko, *Ikonostas cerkwy...*, op. cit.



16 The iconostasis of the Church of the Nativity (1801–1803) in the Far Caves of the Kyiv-Pechersk Lavra. Photo G. Marchenko

Ikonostas cerkwi Narodzenia Pańskiego (1801–1803) w Dalekich Pieczarach Ławry Peczerskiej w Kijowie. Fot. G. Marchenko

17 The iconostasis of the Church of St Barlaam of Pechersk in the Near Cave of the Kyiv Cave Monastery, 1818. Scanned from the book: *Skarby Kyjevo-Pechers'koi' lavry*, 1998

Ikonostas cerkwi Świętego Waarłama Peczerskiego z Bliskiej Pieczary Ławry Peczerskiej w Kijowie, 1818. Skan z albumu: *Skarby Kyjevo-Pecherskoi lavry*, Kijów 1998

18 The iconostasis of the Church of the Entry of the Most Holy Theotokos into the Temple in the Near Cave of the Kyiv Cave Monastery, 1819. Scanned from the book: *Skarby Kyjevo-Pechers'koi' lavry*, 1998

Ikonostas cerkwi Wprowadzenia do Świątyni Przenajświętszej Bogurodzicy z Bliskiej Pieczary Ławry Peczerskiej w Kijowie, 1819. Skan z albumu: *Skarby Kyjevo-Pecherskoi lavry*, Kijów 1998

and the sacristan Hieromonk Aasson. The works continued from 1809 to 1814.³² 'The iconostasis is of copper, fixed in place by a bond of iron strips, [...] in which the royal gates are minted in mottled gilding and slotted [...].'³³

The next oldest surviving metal iconostasis is the iconostasis of the Church of St Barlaam of Pechersk (1818) in the Near Caves (fig. 17). The iconostasis was established '[...] by the custodian of this holy cave, the cathedral elder Hieromonk Philaret [...] by the master Fedor Korobkin'. The iconostasis 'is of copper, it has a brass-engraved, carved and gilded royal gate.'³⁴

³² Ja. W. Łytwynenko, *Ikonostas cerkwy...*, op. cit., pp. 66–67.

³³ Glavnaya tserkovnaya i riznichnaya opis' Dal'nikh peshcher Kievo-Pecherskoj Lavry, sostavlenaya v 1893 g., *Lavrs'kyi al'manakh* 2012, no. 27, pp. 8–16.

³⁴ Ibid. p. 9



17



18

The iconostasis of the Church of the Entry of the Most Holy Theotokos into the Temple (1819) (fig. 18) was installed 'with the blessing [...] of Serapion Metropolitan of Kyiv and Galicia [...] instead of the wooden one, it is copper and gilded [...] the weight of the iconostasis is 8 poods and 10 pounds of copper, silver in the iconostasis except for the old iconostases weighs 27 pounds

and 7 lots; the old iconostases weigh 9 pounds and 19 lots; 193 gold ruble coins //10.083 rubles with materials, made in Kyiv, on 21 November 1819 by the master Feodor Korobkin.³⁵

The iconostases of the cave churches have a specific architecture – the constructions are subordinated to the volume of the underground church and consists of a mullion-beam system, which fulfils a load-bearing function and on which copper plates with paintings are mounted by means of overlay elements; the structure ends with a semicircular entablature.

The programme for the iconostases in the underground churches has a reduced iconography – the prophetic and apostolic rows and the Deesis are combined into single compositions; each icon of the local row is accompanied by an allegorical story in the base row.

The images are executed in the spirit of the Synodal period – they represent religious painting, compromising in style, where academic painting techniques are combined with features of traditional icon-painting.

Chronologically, the next complex in the history of Lavra painting on metal is a series of icons on copper plates with images of Pechersk saints (1840–1850) to be placed over the tombs with their relics in the caves of the Kyiv-Pechersk Lavra³⁶ (fig. 19). The traditional iconography of the Pechersk Fathers was given a new pictorial language in the middle of the nineteenth century; this combination of ‘traditional’ and ‘new’ in these images has been defined as an ‘icon-portrait’ (N. S. Leskov).³⁷ Indeed, these likenesses are on the borderline of an icon and a funerary portrait with regard to their imagery and artistic techniques.

In 1884–1885, in Venice, Mikhail Vrubel (1856–1910) painted icons on zinc supports for the iconostasis of the Church of St Cyril and St Athanasius (Cyril Church) in Kyiv. The images – ‘a product of Venetian impressions’ – were executed as a response to the art of the Italian Quattrocentists;³⁸ the zinc sheets were taken to Venice from Kyiv by A. Prakhov (1846–1916), the manager of the Cyril Church.³⁹

It was at that time, in 1885, that they concluded their first contract with Viktor Vasnetsov (1848–1926) for the painting of the principal altar of St Volodymyr’s Cathedral with oil paints, six icons for the principal iconostasis and fourteen icons for the royal gate on finished zinc sheets.⁴⁰ In May 1893, in Moscow, copper sheets for the royal gates were primed and zinc sheets for the iconostasis were ordered.⁴¹ The images for the iconostasis were completed in June 1894.⁴²

It marked a new era in the history of painting on metal in Kyiv. Although still directly connected to the Church, there was an inclination towards genre diversity (portrait, landscape, historical

³⁵ Ibid. p. 11.

³⁶ Olena V. Lopukhina O. V., ‘Ikony prepodobnykh u pecherakh – tvory ikonopysnoi’ majsterni Kyjevo-Pecherskoi’ lavry 1840–1850-kh rr.’, in: *Mogylyans’ki chytannya 2012 roku*, ed. V. Kolpakova et al., Kyiv 2013, pp. 272–276.

³⁷ Nikolaj S. Leskov, ‘Melochi arkhirejskoj zhizni’, in: Leskov N. S., *Sobranie sochinenij*, vol. 6, Moscow 1956, pp. 450–453.

³⁸ N. Tarabukin, *Mikhail Aleksandrovich Vrubel*, Moscow 1974, pp. 137, 167, note 13.

³⁹ E. P. Gomborg-Vierzhbinskaya, Yu. P. Podkopaeva, ed. Mikhail Aleksandrovich Vrubel. *Perepiska. Vospominaniya o khudozhnike*. Moscow 1963., p. 17. ‘In November 1884 he (Vrubel) went to Venice and stayed there until May 1885. He studied original twelfth-century mosaics and mosaics made from Titian cartoons in St Mark’s Cathedral, mosaics in St Mark’s Church in Torcello near Venice and paintings by Venetian masters – Cima da Conegliano, Bellini, Titian, Tintoretto, Veronese. Four icons commissioned to Vrubel by Prakhov were made there in Venice on large zinc plates.’

⁴⁰ Eleonora W. Paston, ‘Sobornij ideal Vasnetsova. Rabota khudozhnika vo Vladimirskom sobore v Kieve (1885–1896)’, *Vestnik Pravoslavnogo Svyato-Tikhvinskogo humanitarnogo universiteta*, seria V, *Voprosy istorii i teorii khristianskogo iskusstva* 2019, issue 36, pp. 151–162, <https://periodical.pstgu.ru/ru/series/issue/5/36/article/7089> (accessed: 15/03/2023); Svetlana S. Stepanova, ‘Khudozhestvennaya programma rospisej Vladimirskogo sobora v Kieve’, *Vestnik slavyanskikh kul’tur* 2016, vol. 39, no. 1, pp. 150–161, <https://cyberleninka.ru/article/n/hudozhestvennaya-programma-rospisej-vladimirskogo-sobora-v-kieve> (accessed: 15/03/2023).

⁴¹ N. A. Yaroslavtseva, ed. Viktor Mikhailovich Vasnetsov. *Pisma. Dnevnik. Vospominaniya. Suzhdeniya sovremennikov*, Moscow 1987, p. 119, notes 57, 58.

⁴² Ibid., p.128.



19 Icon with image of Pechersk saints to be placed over the tombs with their relics in the caves of the Kyiv-Pechersk Lavra, 1840–1850. Photo Y. Koganov

Ikona z wizerunkiem świętych peczerskich do umieszczenia nad grobami z ich relikwiami w pieczarach Ławry Peczerskiej w Kijowie, 1840–1850. Fot. J. Koganow

20 G.I. Popov, Icon *The Assumption of the Blessed Virgin Mary*, 1858 – not before 1915. The icon for the iconostasis the refectory of the Church of the Venerable Anthony and Theodosius of the Kyiv Cave Monastery. Photo G. Marchenko

Ikona Gieorgija Iwanowicza Popowa *Wniebowzięcie Najświętszej Maryi Panny*, 1858 (nie wcześniej niż 1915). Ikona do ikonostasu w refektarzu cerkwi Świętych Antoniego i Teodozjusza Peczerskich w Ławrze Peczerskiej w Kijowie. Fot. G. Marchenko



painting); the painting in Kyiv churches was already based on genuine academic traditions, where historical and folklore motifs were combined with elements of the Art Nouveau style.

In the period from 1895 to 1910, the artistic ensemble of the church and the refectory of the Church of the Venerable Anthony and Theodosius were created.⁴³ The murals on the walls, the icons for the iconostasis and the icon stands were painted by the artists G. I. Popov (1858– not before 1915) and I. S. Izhakevich (1864–1962). The icons of the iconostasis have survived in six local icons, including: *Christ the Almighty*; *The Mother of God with the Child*; *St Anthony and St Theodosius of Pechersk*; *Saints Cyril and Methodius*; *The Assumption of the Blessed Virgin Mary* (fig. 20), and *The Ascension of Christ* painted on a zinc plate by G. I. Popov; *The Twelve Apostles*, 1907, in a separate icon case, painted on copper by I. S. Izhakevich;⁴⁴ here the biblical subjects and images are painted by artists in the spirit and style of academic painting, and revealed in a historical context rather than in cultic themes.

Paintings on metal were also used to decorate the facades of churches. The niches on the facades of the refectory of the Church of the Venerable Anthony and Theodosius contain images

⁴³ Olena Pitateleva, 'Monumental'nyj zhyvopys ta ikonopys G. I. Popova v Lavrs'kij Trapeznij palati ta tserkvi, in: *Lavrs'ki mystectvoznavchi studii*, Kyiv 2015, pp. 51–97.

⁴⁴ Anna A. Marchenko, 'Issledovanie i atributsiya ikony "Sobor 12 apostolov" na mednoi osnove nachala XX veka', in: *Ékspertiza i atributsiya proizvedenii izobrazitelnogo i dekorativno-prikladnogo iskusstva. Proceedings of 17th and 18th Scientific Conferences*, Moscow 2011, 23–25 November, 2012, 21–23 November, Moscow 2015, pp. 246–252.

of the Venerable Pechersk saints painted on zinc supports,⁴⁵ and there were also images on iron supports on the front of the Trinity Gate Church (1742–1744)⁴⁶ executed by artists of the Kyiv-Pechersk Lavra school of painting in the traditions of the academic school.⁴⁷

Paintings – memorial contributions by G. K. Vigurov *St Alexander and St Appolonia*, 1909⁴⁸ (fig. 21), I. C. Izhakevich's *Portrait of Gen. Penkina*, after 1917⁴⁹ (fig. 22) and *St Claudia* by an unknown artist, no earlier than 1888,⁵⁰ are executed as independent easel works – tomb portraits, on zinc sheets of considerable thickness and monumental format.

In total, more than 120 icons/paintings on metal supports (copper, black metal, zinc) are preserved in the collections of the Kyiv-Pechersk Lavra. They include icons from iconostases, analogion double-sided icons, small pictorial inserts in icon cases and icon case frames, hanging icons for chandeliers and cropped images used as candlesticks and top plates, religious paintings, and memorial portraits.

The collection of the National Art Museum of Ukraine contains ten picturesque panels painted on zinc plates by the artist S. Svetoslavsky (1857–1931) inspired by the stories from Tolstoy's novel *Prince Silver*⁵¹ (fig. 23); the panels were painted in 1905–1908 to decorate the interior of the house of the Kyiv timber merchant S. Mogilevtsev.⁵² There are two more chamber-format paintings from the Museum's collection on zinc by an unknown artist, *Portrait of a Woman*, mid-nineteenth century⁵³ (fig. 24) and *Mama's Coming* by I. S. Izhakevich⁵⁴ (fig. 25). The works of secular artists in the genres of history and portraiture demonstrate that the technique of painting on metal became firmly entrenched in the everyday lives of ordinary artists in the second half of the nineteenth and the first quarter of the twentieth century.

By considering these artworks in chronological order, a certain material context has been established. The icons from the late seventeenth century (1691), icons from the Church of St Barlaam of Pechersk in the Near Caves of the Kyiv-Pechersk Lavra, and written testimony by Paul of Aleppo 1650, as well as pictorial panels by S. Svetoslavsky and I. S. Izhakevich from the first

⁴⁵ Anna A. Marchenko, 'Ikony na metali z fasadu Trapeznoyi tserkvy Prpp. Antoniia ta Feodosiia Pechers'kykh Kyjevo-Pechers'koyi lavry. Suchasnyi stan zberezheniia', in: *Mogylyans'ki chytannia 2012 roku*, ed. V. Kolpakova et al., Kyiv 2013, pp. 465–469.

⁴⁶ A. Ju. Kondratyuk, *Monumentalnyi zhypovys Troi'ts'koi' nadbramnoi' tserkvy Kyjevo-Pechers'koi' lavry*, Kyiv 2005, p. 14.

⁴⁷ Olena W. Lopukhina, 'Ikonopysna shkola Kyjevo-Pechers'koi' lavry XIX – pochatku XX st. Khudozhni priorytety, praktichni zavdannia, osvita ta vykhovannia', in: *Tserkva – nauka – suspil'stvo: pytannia vzajemodii*. *Proceedings of 11th International Scientific Conference*, National Scientific Research and Restoration Center of Ukraine, Kyiv 2013, May 29–31, pp. 181–184.

⁴⁸ Zinc, oil technique, gilding, engraving, enamel, 155 × 90 × 5, KPL-NDF-2511, inscription on the back: 'This image was built in the eternal memory of the Servant of God State Councilor Alexander Ivanovich Vaskovsky, died 1908 on 8 April as a monument from his friend – his wife Appolonia Fominichna Vaskovskaya, 1909.'

⁴⁹ 90 × 50, KPL-Zh-1959, According to the record in the archives KPL-A-NDF-136, p. 58, record no. 50585, the icon came from St Vladimir's Cathedral. The inscription on the back of the icon reads: 'Portrait of a wife (supposedly of General Penkin) who died in 1917. It was commissioned by Penkin himself to the artist Izhakevich and presented to the Volodymyr Cathedral.' On the edge of the icon is the inscription 'Volod. Cathedral.'

⁵⁰ 73 × 66, KPL-Zh-1609, According to the record in the archives KPL-A-NDF-133, p. 281, record no. 40119, the icon came from the Alexander Nevsky Church (1888–1934); underneath the icon, on the plate, was a memorial inscription that the icon was a contribution by Demchenko in memory of his deceased daughter Klavdia.

⁵¹ Olga Ryzhova, Wiera Raspopina, 'Tekhnologicheskoe issledovanie zhivopisnykh proizvedenii S. Svetoslavskogo iz kollektsii Natsional'nogo khudozhestvennogo muzeya Ukrainy', in: *Ekspertiza i atributsiia proizvedenii izobrazitel'nogo iskusstva. Proceedings of 14th Scientific Conference*, 2008, 26–28 November, Moscow 2009, pp. 26–28.

⁵² Lesia W. Tolstova, 'K voprosu o proiskhozhdenii desyati panno S. Svetoslavskogo iz Kollektzii Natsional'nogo khudozhestvennogo muzeya Ukrainy', in: *Ekspertiza i atributsiia proizvedenii izobrazitel'nogo iskusstva. Proceedings of 4th Scientific Conference*, 2008, 26–28 November, Moscow 2009, pp. 29–31.

⁵³ 24 × 20. zinc, oil technique. Zh-1150.

⁵⁴ 26 × 18,2. zinc, oil technique. Zh-540.



21



22

- 21 G.K. Vigurov, *Icon St Alexander and St Appolonia*, 1909. Photo O. Andrushchenko
Ikona G.K. Vigurova *Święty Aleksander i Świąta Apolonia*, 1909. Fot. O. Andrushchenko
- 22 Ivan Sidorovich Izhakevich, *Portrait of Penkina*, after 1917. Photo S. Polyushko
Ivan Sidorovich Izhakevich, *Portret Penkiny*, po 1917. Fot. S. Polyushko

quarter of the twentieth century, have been used as reference points with regard to time. This suggests that painting on metal in Kyiv as a tradition has been uninterrupted for more than two and a half centuries. Although, from the middle of the seventeenth century until the middle and third quarter of the nineteenth century, artists painted on copper and iron sheets, from the last quarter of the nineteenth century through the first quarter of the twentieth century, zinc supports were added to the iron and copper sheets and became predominant.

The relatively small number of surviving artworks and the even more limited range of items that are dated, and are of precise origin, elevates them to the rank of unique. This fact and the current level of research require, firstly, an in-depth analysis of their material composition, the results of which can form or influence the final objective attribution of each work, in addition to the traditional data on the history and iconography of the artwork. Secondly, the desire to accumulate a maximum amount of reliable information about the technique and technology used for Kyiv paintings on metal supports, enables a better disclosure of the artistic identity of each work, but in the majority of cases, it will allow clarification of the attribution.



Purpose of the study, source base and research area

The purpose of this article is to publish the results of a comprehensive study of paintings on metal supports using the oil painting technique dated from the late seventeenth century – first quarter of the nineteenth century, located in the leading Kyiv museum collections: the National ‘Kyiv-Pechersk Lavra’ Preserve (NP ‘KPL’ or the Preserve) and the National Art Museum of Ukraine (hereinafter referred to as NAMU or the Museum).

The study was based on icons and paintings on metal, canvas and wood, created between the end of the seventeenth century (1691) and the first quarter of the twentieth century, with confirmed Kyiv origin.

Twenty-one copper icons: *Christ the Almighty*; *Our Lady Hodegetria*; *Exaltation of the Holy Cross*; *Venerable Anthony Pechersky* and *Venerable Theodosius Pechersky* from the 1700 iconostasis of the Church of the Exaltation of the Holy Cross in the Near Caves of the Kyiv-Pechersk Lavra; medallion icons, inserts of the icon case of the Mother of God icon from the Cathedral of the Assumption: *Archangels*; *Behold the Tabernacle of God*, *Behold the Men* (Depiction of the Cathedral of the Assumption of the Kyiv-Pechersk Lavra); *Our Lady of Kupiatitsy*; *God the Father*; *The Ascension of the Virgin Mary* and *The Annunciation*; double-sided analogion icons: *Prince Vladimir / Venerable Athanasius of Athos*, the first third of the eighteenth century;⁵⁵ the tombstone icon *St Erasmus of Pechersk*, 1840–1850;⁵⁶ the tops of proskynetaria dated to 1769 from the Church of the Exaltation of the Holy Cross in the Near Caves.⁵⁷ *The New Testament Trinity*⁵⁸ and

⁵⁵ 21.5 × 17 × 0.1, copper, primer, oil technique. KPL-Zh-351.

⁵⁶ 50.5 × 44.5 × 0.1, copper, primer, oil technique. KPL-Zh-1653.

⁵⁷ Olga Ryzhova, ‘Doslidzhennya ta atrybutsiya ikon “Trijtsya Novozavitna” ta “Blagovishchenniya” z koleksii Natsional’nogo Kyjevo-Pechers’kogo istoryko-kul’turnogo zapovidnyka’, *Bulletin of Kharkiv State Academy of Design and Arts* 2017, no. 4, pp. 75–80.

⁵⁸ 31.5 × 34.5 × 0.1, framing: wood, carving, levkas, gilding, polyment, 86.5 × 62. copper, amalgam gilding, primer, oil technique. KPL-Zh-1675.



- 23 Serhiy Svetoslavsky. Picturesque panels based on the stories of Tolstoy's novel *Prince Silver*, 1857–1931. Photo M. Andreev
 Serhiy Svetoslavsky, pejzaże oparte na historiach z powieści Aleksego Konstantynowicza Tołstoja *Książę Srebrny*, 1857–1931. Fot. M. Andreev
- 24 Unknown artist. *Portrait of a Woman*, mid 19th century. Photo M. Andreev
 Autor nieznaný, *Portret kobiety*, połowa XIX wieku. Fot. M. Andreev
- 25 Ivan Sidorovich Izhakevich, *Mama's coming*, mid 19th century. Photo M. Andreev
 Ivan Sidorovich Izhakevich, *Mama nadchodzi!*, połowa XIX wieku. Fot. M. Andreev

The Annunciation, 1769;⁵⁹ *Slaughter of the Innocents*, 1811;⁶⁰ *St Nicholas* (Miracle of the Salvation of the Shipmen), the eighteenth century, with records dated to the nineteenth century;⁶¹ *St Luke the Evangelist*, (*St Theodosius of Pechersk?*), 1730s (with renovations in the 1760s)⁶² are kept in the Preserve's collections.

The technical and technological data of: 1) four icons from the local row of the old iconostasis (1691) of the cave church of St Barlaam of Pechersk in the Near Caves; 2) icons from the iconostasis (1761–1762) of the cave church of St Theodosius of Pechersk, and 3) icons from the iconostasis (1801–1803) of the Church of the Nativity of Christ in the Far Caves, Kyiv-Pechersk Lavra, were used as dated benchmarks from the late seventeenth, eighteenth and early nineteenth centuries, respectively; all the icons are in situ in the cave churches of the Kyiv-Pechersk Lavra.

⁵⁹ 32.5 × 34.5 × 0.1, framing: wood, carving, levkas, polymer, gilding. 74 × 60, copper, amalgam gilding, primer, oil technique. KPL-Zh-1674, Olga Ryzhova, „Doslidzhennya ta atrybutsiya...”, op. cit., pp. 75–80.

⁶⁰ 72 × 72 × 0.1, copper, primer, oil technique. KPL-Zh-1672.

⁶¹ 12.5 × 16.7 × 0.1, copper, primer, oil technique. KPL-Zh-672.

⁶² 42 × 14 × 0.1, copper, primer, oil technique. KPL-Zh-1866.

In addition, data from comprehensive studies of artworks dated to the eighteenth century are used as comparative material: 1) painting on canvas – *Portrait of Yelysei Pletenetsky, Archimandrite of the Kyiv-Pechersk Lavra*,⁶³ the icons: *The Ascension of Christ*,⁶⁴ *Healing the Bleeding Woman*,⁶⁵ *The Crucifixion*,⁶⁶ *The Meeting of Abraham and Melchizedek*,⁶⁷ *The Descent of the Holy Spirit Upon the Apostles*,⁶⁸ and *The Saviour Gives the Apostles the Power to Heal the Sick*,⁶⁹ from the back of the iconostasis of the Trinity Gate Church of the Kyiv-Pechersk Lavra;⁷⁰ 2) icons painted on wood: *Our Lady Hodegetria (Trinity-Ilyinskaya)*,⁷¹ *Unmercenary Saints, Healers and Miracle Workers*,⁷² *Alexis the Man of God*,⁷³ *Nativity of the Blessed Virgin Mary*,⁷⁴ *The Nativity of Christ*,⁷⁵ *The Circumcision of the Lord*,⁷⁶ *The Baptism of the Lord*⁷⁷ and *The Ascension of the Lord*,⁷⁸ from the NP 'KPL' collection⁷⁹ and icons on the lowest tier of the iconostasis of the Trinity Gate Church,⁸⁰ as well as 3) data from the reports on the restoration of the Trinity Gate Church.⁸¹

The research **methodology** is based on the use of the principles of historicism and comparative analysis. The specific material structure of the icons are identified with technical and technological studies that included optic studies of the surface of the painting in visible diffused and raking light conditions, in the infrared (IR) and ultraviolet (UV) radiation range, a layered visual microscopic study of the surface of the paint layer, sampling of the ground and paint layers; determining the composition of the ground and pigments used in the paint layers.

The **state of research** in the study of paintings on metal from the collection of the NP 'KPL' are single publications by researchers of the Department of Scientific Restoration and Conservation of Movable Monuments of the Preserve. Comprehensive studies (documentary,

⁶³ 218 × 130, KPL-Zh-29, Olga Ryzhova, Wiera Raspopina, 'Issledovanie i restavratsiya Portreta arkhimandrita Kievo-Pecherskogo monast'rya Eliseya Pletenetskogo i Portreta mitropolita Petra Mogily iz fondov Natsional'nogo Kievo-Pecherskogo zapovednika', in: *Issledovaniya v konservatsii kul'turnogo naslediya. Proceedings of International Scientific and Practical Conference*, issue 3, Moscow 2012, pp. 253–257.

⁶⁴ 150 × 125, canvas, primer, oil technique. KPL-PA-183.

⁶⁵ 126 × 123, canvas, primer, oil technique. KPL-PA-184.

⁶⁶ 145 × 117, canvas, primer, oil technique. KPL-PA-185.

⁶⁷ 125 × 118, canvas, primer, oil technique. KPL-PA-186.

⁶⁸ 117 × 71, canvas, primer, oil technique. KPL-PA-177.

⁶⁹ 118 × 71, canvas, primer, oil technique. KPL-PA-178.

⁷⁰ Olga Ryzhova, *Ikonopys u khudozhnij...*, op. cit., pp. 218–228.

⁷¹ 125 × 72, wood, levkas, KPL-Zh-186. Olga Ryzhova, 'Doslidzhennya ikony "Bogorodytsya Odygitiya" (Troit'se-Il'ins'ka) z koleksiji Natsional'nogo Kyjevo-Pechers'kogo istoryko-kul'turnogo zapovidnyka', *Visnyk Derzhavnoi akademii kerivnyh kadrov kul'tury i mystetstv* 2018, no. 2, pp. 266–269.

⁷² 28 × 25, wood, levkas, KPL-Zh-1531 Olga Ryzhova, 'Doslidzhennya ta atrybutsiya ikony "Svyati bezsribnyky, tsilyteli i chudotvortsy" z koleksii' Natsional'nogo Kyjevo-Pechers'kogo istoryko-kul'turnogo zapovidnyka', *Traditions and novations of the higher architectonic and art education* 2017, no. 4, pp. 105–110.

⁷³ 41.5 × 31.5, wood, levkas, KPL-Zh-516 Olga Ryzhova, Wiera Raspopina, 'Podpisnaya ikona Ivana Kosachinskogo Aleksii Chelovek Bozhii iz koleksii Natsional'nogo Kievo-Pecherskogo istoryko-kul'turnogo zapovednika', in: *Ékspertiza i atributsiya proizvedenii izobrazitel'nogo i dekorativno-prikladnogo iskusstva. Proceedings of 17th and 18th scientific conferences*, Moscow 2011, 23–25 November, 2012, 21–23 November, Moscow 2015, pp. 237–240.

⁷⁴ 46 × 63, wood, levkas, oil technique, KPL-Zh-1462.

⁷⁵ 48 × 61, wood, levkas, oil technique KPL-Zh-1626.

⁷⁶ 46.8 × 62.4, wood, levkas, oil technique KPL-Zh-1463.

⁷⁷ 46 × 61, wood, levkas, oil technique KPL-Zh-1464.

⁷⁸ 46 × 61, wood, levkas, oil technique KPL-Zh-1439.

⁷⁹ Olga Ryzhova, *Ikonopys u khudozhnij...*, op. cit., pp. 191–194.

⁸⁰ Olga Ryzhova, Wiera Raspopina, A. A. Izotov, Ye. A. Soroka, Rezul'taty kompleksnykh naturnykh issledovaniy ikon iz fondov koleksii NKPIZ, in: *Tserkva – nauka – suspil'stvo: pytannya vzajemodii*. *Proceedings of 10th International Scientific Conference*, National Scientific Research and Restoration Center of Ukraine, Kyiv 2012, 30 May – 1 June, pp. 197–200.

⁸¹ Natsional'nyj Kyjevo-Pecherskyj istoryko-kul'turnyj zapovidnyk (NKPIKZ), KPL-A-NVF-400–405, *Proektnye predlozheniya i otchet o restavratsiyi ikonostasa Troitskoj Nadvratnoj tserkvi KPL. 1983–1984*, vols. 1–5.

bibliographic, stylistic and iconographic, technical and technological) are conducted during the restoration of monuments. The main results of the work are recorded in a number of articles by O. Ryzhova co-authored with V. Raspopina: 'Disclosure of the Icon on Metal "The Annunciation"' (from the funds of the National Kyiv-Pechersk Historical and Cultural Preserve (2008–2009)),⁸² 'Technological Characteristics of Painting Icons of the Eighteenth Century of Kyiv Origin' (2012),⁸³ 'Kyiv icons of the eighteenth century from the collection of the National 'Kyiv-Pechersk Lavra' Preserve: research and attribution' (2013),⁸⁴ 'Technical and Technological Painting Characteristics of Eighteenth Century Icons of the Kyiv-Pechersk Lavra from the Collection of the National 'Kyiv-Pechersk Lavra' Preserve (2015),⁸⁵ and in articles by A. Marchenko, co-authored by V. Raspopina: 'Study of the Icons of the Iconostasis of the Church of the Nativity of Christ in the Far Caves of the Kyiv-Pechersk Lavra' (2016),⁸⁶ 'Restoration and study of the icon "Faces of the Holy Apostles" from the iconostasis of the Church of the Nativity (Far Caves of the Kyiv-Pechersk Lavra). Unexpected discoveries' (2016)⁸⁷ and N. Onoprienko's 'Painting on metal. Problems of research and restoration. (On the example of monuments from the collection of the National 'Kyiv-Pechersk Lavra' Preserve)' (2012),⁸⁸ 'Typology of Copper Bases of Icons of the Kyiv-Pechersk Lavra of the Eighteenth Century' (2016).⁸⁹ In the context of the study, reference should also be made to the collective academic work 'The Iconostasis of the Church of the Nativity of Christ from the Far Caves of the Kyiv-Pechersk Lavra. Research and Restoration' (2018),⁹⁰ by specialists of the Department of Scientific Restoration and Conservation of Movable Monuments of the National 'Kyiv-Pechersk Lavra' Preserve.

Presentation of the results of the study

Supports

Copper and zinc supports of Kyiv icons dating from the end of the seventeenth, the eighteenth, and the first quarter of the nineteenth centuries underwent in-depth study by restorers of the Department of Scientific Restoration and Conservation of Movable Monuments of NP 'KPL',

⁸² Olga Ryzhova, 'Raskrytie ikonŭ na metalle Blagoveshchenie (iz fondov Natsional'nogo Kievo-Pecherskogo istoriko-kul'turnogo zapovednika)', in: *Mogylyans'ki chytannya 2008 roku*, ed. V. Kolpakova et al., Kyiv 2009, pp. 549–553.

⁸³ Olga Ryzhova, 'Tekhnologichni osoblyvosti...', op. cit., p. 22.

⁸⁴ Olga Ryzhova, Vera Raspopina, 'Ikonŭ Kieva...', op. cit., pp. 333–335.

⁸⁵ Olga Ryzhova, Vera Raspopina, 'Tekhniko-tehnologicheskie osobennosti ikon Kievo-Pecherskoj Lavry XVIII veka veka iz kollektzii Natsional'nogo Kievo-Pecherskogo istoriko-kul'turnogo zapovednika', in: *Ėkspertiza i atributsiya proizvedenii izobrazitel'nogo i dekorativno-prikladnogo iskusstva. Proceedings of 17th and 18th scientific conferences*, Moscow, 2011, 23–25 November, 2012, 21–23 November, Moscow 2015, pp. 26–33.

⁸⁶ Anna A. Marchenko, Wira O. Raspopina, 'Doslidzhennya ikon ikonostasu tserkvy Rizdva Khrystovogo u Dal'nikh pecherakh Kyjevo-Pechers'koi' lavry', in: *Doslidzhennya, konservatsiya, restavratsiya rukhomykh pam'yatok istorii' ta kul'tury. Tradytsii, innovatsii. Report on Proceedings of 10th International Scientific and Practical conferences*, Kyiv 2016, 24–27 May, Kyiv 2016, 24–27 May, Kyiv 2016, pp. 202–207.

⁸⁷ Anna A. Marchenko, Wira Raspopina, 'Restavratsiya ta doslidzhennya ikony "Lyky sv. Apostoliv" z ikonostasa tserkvy Rizdva Khrystovogo. Dal'ni pechery Kyjevo-Pechers'koi' lavry. Nespodivani vidkryttya', in: *Mogylyans'ki chytannya 2015 roku*, ed. V. Kolpakova et al., Kyiv 2016, pp. 249–255.

⁸⁸ Anna Marchenko, 'Zhivopis' na metalle. Problemy issledovaniya i restavratsii (na primere pamyatnikov iz kollektzii Natsional'nogo Kievo-Pecherskogo istoriko-kul'turnogo zapovednika)', in: *Issledovaniya v konservatsii kul'turnogo naslediya*, issue 3, *Materialy mezhdunarodnoi nauchno-metodicheskoi konferentsiyi*, Moscow 2012, pp. 155–160.

⁸⁹ Anna A Marchenko, N. O. Onopriienko, *Typolohija midnykh osnov ikon Kyjewe-Peczerskoj Lavry XVIII w.*, [w:] *Muzeji ta restawracija u konteksti zberezennia kulturnoji spadshczyzny. Materialy Miznarodnoji naukovo-praktycznoji konferenciji*, ed. W. H. Czerneć et al., Kyiv 2016, pp. 73–77.

⁹⁰ A. W. Belilov's'ka, S. W. Gaha-Szeremetieva, Anna A. Marchenko, N. O. Onopriienko, A. W. Chernenko, *Ikonostas tserkvy Rizdva Khrystova z Dal'nikh pecher Kyjevo-Pechers'koi' lavry. Doslidzhennia ta restavratsii*. Naukovo-doslidna robota, no. ДР 0116U005210, Natsional'nyj Kyjevo-Pechers'kyj istoryko-kul'turnyj zapovidnyk, Kyiv 2018, typescript in NKPIKZ.

A. Marchenko and N. Onoprienko.⁹¹ According to the study, copper supports/sheets can be divided into three types:

The first type comprises smooth plates with paintings, such as the figure-shaped inset icons from the icon case frames: *The Archangels*; *Behold the Tabernacle of God*, *Behold the men* (Depiction of the Cathedral of the Assumption of the Kyiv-Pechersk Lavra); *Our Lady of Kupiatitsy*; *God the Father*; *The Ascension of the Virgin Mary and The Annunciation* (all icons date from the 1720s and 1730s and come from the interior of the Cathedral of the Assumption); an image of St Luke the Evangelist (St Theodosius of Pechersk?), trimmed in outline, dating from the 1730s, can also be attributed to this group (with renovations in the 1760s), as well as the oval medallion *St Nicholas (Miracle of the Salvation of the Shipmen)*, with the original colourful paint layer dating from the eighteenth century, and new layers of paint added a century later; analogion double-sided icons: *St Prince Vladimir / St Athanasius of Athos*; *St Lawrence the Hermit / St Prokhoros the Wonderworker*⁹² and *St Michael the Metropolitan of Kyiv / St Gregory the Miracle, St Nektary*,⁹³ with paintings dated to the end of the seventeenth–eighteenth centuries and renovations carried out in the eighteenth and nineteenth centuries; icons placed over the shrines with relics of: *St Erasmus of Pechersk*, 1840–1850, and *Slaughter of the Innocents*, 1811; – icons from the iconostasis of the Church of the Nativity (1801–1803).

The second type comprises smooth supports, partly amalgam gilding and partially painted. These include the tops of the proskynetarion analogions *The New Testament Trinity* and *The Annunciation*, dated to 1769, from the Church of the Exaltation of the Holy Cross in the Near Caves of the Kyiv-Pechersk Lavra; icons of St Theodosius of Pechersk, St Ignatius of Pechersk, icons of the Apostles and Prophets from the iconostasis of the Church of St Theodosius of Pechersk (1761–1762) in the Far Caves of Kyiv-Pechersk Lavra; icons of the iconostases in the underground churches of St Anthony of Pechersk (1809–1814), St Barlaam of Pechersk (1818) and the Entry of the Most Holy Theotokos into the Temple (1819) in the Near Caves of Kyiv-Pechersk Lavra.

The third type covers embossed supports with ornamental decor and pictorial inserts: images of faces, hands, and feet, individual figures or small compositions in cartouches, made using the oil painting technique on surfaces not covered by gilding and ornamentation. These include icons from iconostases of icons dated to 1691 in the Church of the Exaltation of the Holy Cross in the Near Caves of the Kyiv-Pechersk Lavra; icons of Christ, the Mother of God with the Child, the Deesis from the iconostasis of the Church of the St Theodosius of Pechersk (1761–1762) in the Far Caves of the Kyiv-Pechersk Lavra.

The copper sheets, ranging in thickness from 0.1 to 2 mm, were made using techniques characteristic of metalcrafts in the seventeenth and eighteenth centuries. Depending on their purpose, the sheets went through different stages of preparation. The first step was to hammer out a metal ingot to the plate stage of the required thickness. The copper sheet was then cut to the required shape. Next, the sheet was embossed with ornaments and gilded. And only after that was the painting applied (alternatively, an image was drawn); in some cases, the back of the copper sheet was covered with a protective layer of oil paint.⁹⁴

The zinc sheets were examined during restoration of the icons from the facades and iconostasis of the Refectory Chamber in the Church of St Anthony and St Theodosius of Pechersk,⁹⁵ and S. Svetoslavsky's picturesque *Prince Silver* panels from the interior of S. Mogilevtsev's house.

⁹¹ Anna A. Marczenko, N. O. Onoprijenko, *Typolohija midnych...*, op. cit., p. 75.

⁹² 24 × 20.5 × 0.1, double-sided icon, copper, oil technique, KPL-Zh-473.

⁹³ 24 × 20.5 × 0.1, double-sided icon, copper, oil technique, KPL-Zh-388.

⁹⁴ Anna A. Marczenko, N. O. Onoprijenko, *Typolohija midnych...*, op. cit., pp. 74–75.

⁹⁵ Anna A. Marczenko, N. O. Onoprijenko, 'Z dosvidu restavratsii ikon na tsynkovykh osnovakh', in: *Doslidzhennya, konservatsija, restavratsija rukhomykh pam'atok istoriyi ta kul'tury. Tradytsiyi, innovatsiyi. Report on Proceedings of 10th Scientific and Practical Conference*, Kyiv 2016, 24–27 May, Kyiv 2016, 24–27 May, pp. 195–201.

Rolled zinc plates (0.1 cm thick) are used in the ensemble from the facade of the Refectory Chamber. On the back of the icon *Bishop Niphont of Novgorod* and on the front of the icon *Saint Damian the Healer* the stamp of the 'Emma' zinc-rolling factory was found. This factory had operated since the 1870s in Sosnovice (now Poland).⁹⁶ The zinc and copper plates for the iconostasis of St Volodymyr's Cathedral were made in 1893–1896 at the Association of the Factory of Metal Products of Andrey Postnikov (operating between 1886 and 1917 in Moscow– and owned by Andrey Mikhailovich Postnikov (1835–1900)), where they were also primed; the Postnikovs also undertook enamelling and gilding.⁹⁷ The zinc supports for the Cyril Church icons were bought in Kyiv and sent to Venice.⁹⁸

Ten panels by S. Svetoslavsky are made on solid, thin, large format zinc sheets (105 by 178) and their shape is clearly and directly related to their architectural setting. The upper part of the sheets is of a simple rectangular shape and the contour of the lower 'edge' repeats the outline of a semicircular arched opening in the centre, and two semi-arches on the sides. There are holes around the perimeter of the sheets, probably for attaching them to the plane of the frame beams in the iconostasis.

The variety of metal supports and the wide geographical distribution of their production indicate that the choice of support, the place of purchase, as well as its preparation for painting was entirely at the discretion of the person who ordered the painting.

Ground layers

The next step in the preparation of the support was the application of a ground layer. According to the study, the iconographers of the Kyiv-Pechersk Lavra used two-layers of ground for painting on metal: the lower layer was coloured while the top layer was white.

The following conclusions can be drawn from the present research and published data: the types and composition of ground layers in late seventeenth-century and eighteenth-century works executed on copper and coming from the workshops of the Kyiv-Pechersk Lavra, are similar to the types and composition of the ground layers used in European and Russian easel painting of the same period, but with one nuance – in European and Russian easel painting similar ground layers were used for works made on wood and canvas.⁹⁹

In the icons from the local row of the old iconostasis of the cave church of St Barlaam of Pechersk in the Near Caves, animal glue-and-chalk, single-layer, dark (black and grey¹⁰⁰) ground layers were revealed, to which (a lot of) mineral black and (a small amount of) ochre pigments were added as a filler, along with chalk.

The icons *Christ the Almighty*, *Our Lady Hodegetria* and *The Venerable Theodosius of Pechersk* from the Church of the Exaltation of the Holy Cross in the Near Caves use grounds that are identical to the ones described above (i.e. consisting of animal glue, chalk, mineral black

⁹⁶ Anna A. Marczenko, N. O. Onoprijenko, *Z dosvidu restavratsii...*, op. cit., pp. 200–201.

⁹⁷ N. A. Yaroslavtseva, (ed). *Viktor Mikhailovich Vasnetsov...*, op. cit., p. 391, notes 57–58.

⁹⁸ E. P. Gomberg-Vierzhbinskaya, Yu. P. Podkopaeva, ed. *Mikhail Aleksandrovich Vrubel...*, op. cit., p.17: 'The four icons ordered to Vrubel by Prakhov were made there in Venice on large zinc plates. Vrubel himself commented on the heaviness of the zinc plates for the iconostasis: Ibid., p.68 '... browsing through my Venice (where I sit without leave, because the order is on *heavy zinc plates* that you can't get away with) ...'; Ibid., p. 96 'It cost about 400 francs to ... arrange everything for the first image, of course, the next will be the expense of just the plate ... Could you make the next three plates thinner, because their own weight makes the one I have on my easel bend in the thickness you mentioned ...'

⁹⁹ On the use of copper plates as the basis for painting in European and Russian art, see: Yu. Grenberg, *Ot fayumskogo portreta...*, op. cit., pp. 65–67; on the primers on the copper boards, see: Ibid., p. 88.

¹⁰⁰ The black-grey colour of the primer and inclusions of black pigment can be well identified on cross-sectional parts of the paintings under a microscope. However, the adhesive binder of the primer itself and the penetration of the oil binder from the paint layer into the primer, plus time and ageing factors, have changed the colour of the primer. Visually under the microscope the surface of the primer has a very dark brown colour.

pigment; single-layer, dark, black and grey). The icon of the Exaltation of the Holy Cross uses an animal glue-and-chalk, single-layer, white ground layer.

In the icons *Behold the Tabernacle of God*, *Behold the Men*, *Our Lady of Kupiatitsy*, *God the Father*, *Archangel* from the Assumption Cathedral, two-layer ground was used: the lower layer is red-brown (with chalk, ochre, and black coal filler); the upper layer is white (with gypsum filler); the binder of both layers is animal glue. At the same time, glue-and-chalk, single-layer, white ground layers were revealed in the icon *Archangel*. In the icon *The Ascension of the Virgin Mary* a single-layer, light-coloured primer with a pink tint is used; the filler is chalk, red ochre, cinnabar, and black charcoal; the binder of the ground layer is animal glue.

From the mid-eighteenth century onwards, the ground layers become more varied in composition, indicating the individual preferences of the painters. Icons dating to the mid- and the second half of the eighteenth century use both simple white ground layers, and coloured/tinted ones which are based on chalk and various pigments (yellow and red ochres, vermilion, black coal).

For example, black coal and ochre pigments have been added to the primer in the icon *Prince Vladimir/St Athanasius of Athos*, which gives it a grey tint; the icons, which are elements of the analogion proskynetarion icons *The Annunciation* and *The New Testament Trinity*, feature a single layer of a white glue-and-chalk ground.

The icons dating from the mid-to-late second half of the eighteenth century and from the early nineteenth century (1801–1803) retain this trend: they also use one-layer glue-and-chalk ground: 1) with various pigments (red organic, red ochre or black carbon) added to the filler (along with chalk), giving them a tint (pink or grey); 2) light (white) ground.

During the nineteenth century and the first quarter of the twentieth century, the icon painters continued to use single-layer glue-and-chalk ground with the inclusion of pigments such as black (*Slaughter of the Innocents*, 1811) and red organic ochre (*St Erasmus of Pechersk*, 1840–1850). M. Vrubel's and V. Vasnetsov's icons were primed in the factories in Venice and Moscow, respectively. This was quite common in factory workshops, where metal plates were prepared and primed.¹⁰¹

The ground layers in the icon on copper dated 1907 by I. Izhakevich and on paintings on zinc plates dated 1905–1908 by S. Svetoslavsky consist of two layers on an oil binder. The first layer, which directly covers the metal sheet, consists of minium, orange lead and ceruse (I. Izhakevich), white lead and zinc paint (S. Svetoslavsky). The second layer, also on an oil binder, is pink and consists of white lead and zinc paint and minium (I. Izhakevich), and white and consists of lead and barite white paint (S. Svetoslavsky).¹⁰²

The icons (1910) from the facade of the refectory of the Church of the Venerable Anthony and Theodosius, painted on zinc, have a single-layer oil-based ground, in different shades of red resulting from the use of minium.¹⁰³

Icons on wood, canvas

Two types of ground were identified in the icons under study, dating from the late seventeenth to 1730s: (1) traditional white glue-and-chalk levkas; (2) single-layer chalk-based ground with the addition of various pigments (red ochre, black charcoal) that give them a certain hue (pink, grey).

Icons dating from the mid- to the second half of the eighteenth century (1763, 1769, 1776) use either single-layer, light, glue-and-chalk ground or oil-based ground, with a small addition of animal(?) glue, containing a mixture of chalk and lead white.

Paintings and icons from the nineteenth century and the first quarter of the twentieth century usually feature single-layer, emulsion or oil-based ground; the filler is lead white, chalk or

¹⁰¹ Olga P. Posternak, 'Zhivopis' na metalle: istoriya bytovaniya, tekhnologiya, restavratsiya', in: *Ékspertiza i atributsiya proizvedenii izobrazitel'nogo iskusstva. Proceedings of 12th Scientific Conference*, Moscow 2009, p. 124.

¹⁰² Anna A. Marchenko, 'Issledovanie i atributsiya...', op. cit., p. 248.

¹⁰³ Hanna A. Marchenko, 'Ikony na metali...', op. cit., p. 467.

silica, the binder is a mixture of animal(?) glue and oil, or just oil. Paintings made on canvas and cardboard use, among other things, factory-made primers.¹⁰⁴

The analysis of the ground layers of the Kyiv icons and paintings on metal, wood and canvas, dating from the end of the seventeenth to the first quarter of the twentieth century, showed that the technique and technology of ground layers on metal supports did not differ from those used on wood and canvas.

Pigments

Reliable evidence for dating the works examined is provided by a so-called pigment dating analysis – pigments that have clear timeframes for their use in painting. In the present study, these pigments are blue – azurite, smalt, vivianite, natural ultramarine, indigo, and Prussian blue. All the aforementioned pigments helped to confirm the dating of the icons from the iconostasis of the Church of St Barlaam Pechersky in the Near Caves to the end of the seventeenth century (1691); to the end of the seventeenth/beginning of the eighteenth centuries (1700s) for the icons from the old iconostasis of the Church of the Exaltation of the Holy Cross in the Near Caves; to the end of the third quarter of the eighteenth century (not before 1769) of the fragments of the proskynetarion analogions from the interior of the Church of the Exaltation of the Holy Cross; to date the group of icons found in the ruins of the Dormition Cathedral to the end of the first and beginning of the second quarter of the eighteenth century (1720–1730s), and to determine the time of the painting of the analogion double-sided icons and icons from the underground churches and caves of the Holy Assumption Kyiv-Pechersk Lavra, icons on wood and canvas from the Preserve's collection.

Blue. Azurite as a blue pigment has been found in icons on copper supports from the local row of the old iconostasis (1691) of the cave church of St Barlaam of Pechersk and in an icon *The Exaltation of the Holy Cross* (1700) from the Church of the Exaltation of the Holy Cross in the Near Caves, and in the icon on wood *Saints Boris and Gleb*¹⁰⁵ from the St Sophia Cathedral in Kyiv.

Vivianite was found in the colourful layer of a painting on canvas *Portrait of Yelysei Pletenetsky, Archimandrite of the Kyiv-Pechersk Lavra*, late seventeenth – first quarter of the eighteenth century.

Smalt was found in the icon on wood *Apostles Peter and Paul*¹⁰⁶ from the Kyiv Apostles Peter and Paul Church, icons on wood of a local series and one icon on canvas from the back of the iconostasis of the Trinity Gate Church of the Kyiv-Pechersk Lavra (1734–1735).

Natural ultramarine was revealed in the icons on copper supports: *Our Lady of Kupiatitsy; God the Father; The Ascension of the Virgin Mary* (1720–1730s); *St Luke the Evangelist (St Theodosius of Pechersk?)*, 1730s; the icons from the iconostasis (1801–1803) of the Church of the Nativity in the Far Caves, and in the icon on wood *Our Lady of Kupiatitsy*¹⁰⁷ from the St Sophia Cathedral in Kyiv.

Indigo is found in the icons on copper supports (1700): *St Anthony* and *St Theodosius; Behold the Tabernacle of God, Behold the Men* and *Archangel*, 1720s –1730s; in the icons on wood from the plinth row and in the icons on canvas dated 1734–1735 on the back of the iconostasis at the Trinity Gate Church; in the icons on wood *Archistratigus Michael* and *St Agapia* from the Far

¹⁰⁴ For more information, see: *Kolektsiya NCHMU*, katalog, Natsional'nyj khudozhnij muzej Ukrainy, issue 1, *Zhyvopys XIX – pochatku XX stolittya*, Kyiv 2009, pp. 100–115; 'Tekhnologichni dani zhyvopysnykh tvoriv', in: *Kolektsiya NCHMU*, katalog, National Art Museum of Ukraine, issue. 2, *Zhyvopys XIX – pochatku XX stolittia*, ed. by L. V. Tolstova [et al.], Kyiv 2012, pp. 102–123.

¹⁰⁵ 32.8 × 35.2 × 2, wood, levkas, moulded ornamented levkas, silver-gilt (double), oil painting, KPL-Zh-711, the icon came from Saint Sophia Cathedral in Kyiv.

¹⁰⁶ 94 × 66 × 3, wood, levkas, silver-gilt (double), oil painting, KPL-Zh-173, the icon came from the Church of St Peter and St Paul in Kyiv.

¹⁰⁷ 40 × 31 × 2, wood, levkas, silver-gilt (double), oil painting, KPL-Zh-306, the icon came from the Saint Sophia Cathedral in Kyiv.

Caves of the Kyiv-Pechersk Lavra,¹⁰⁸ and *Alexis the Man of God*, 1749–1752¹⁰⁹ from the Church of St Catherine in Kyiv's Greek Monastery in Podol, by Pavel Kosachinsky (1728–1796).

Prussian blue pigment was found in the icons on copper supports of: *The Annunciation*; *Prince Vladimir/St Athanasius of Athos* (1730s); *St Erasmus of Pechersk* (1840–1850); in the icons on the iconostasis of the Church of St Theodosius of Pechersk (1760–1762), *The Annunciation* (1769) and *The New Testament Trinity* (1769) from the Church of the Exaltation of the Holy Cross; the iconostasis icons from the Church of the Nativity (1801–1803) and *Slaughter of the Innocents* (1811) from the Far Caves, and the icons on wood from the St John the Evangelist chapel of the Cathedral of the Assumption: *The Deesis*;¹¹⁰ *St Apostles (of the Twelve)*;¹¹¹ *Cathedral of the Holy Apostles (of the seventy)*;¹¹² *The Venerable Anthony and Theodosius*, 1764;¹¹³ *The Holy Myrrh-Bearer Equal of the Apostles Mary Magdalene*, 1777;¹¹⁴ *Synaxis of the Holy Seven Archangels*, 1852¹¹⁵ from the Far Caves; *Christ with the Apostles*, 1852,¹¹⁶ and *The Venerable Anthony of Pechersk*, 1850¹¹⁷ from the Cathedral of the Assumption; and icons on canvas from the back of the iconostasis of the Trinity Gate Church (1734–1735).

White paint. In all icons predating the mid-nineteenth century, lead white containing a trace amount of silver has been identified as a white pigment and lead white without silver as white pigment was revealed in icons made after 1850.

Red. All icons use vermilion and an organic red pigment, sometimes with the addition of a small amount of red ochre.

Green. In copper icons dating back to the end of seventeenth century (1691) from the local row of the old iconostasis of the Church of St Barlaam Pechersky in the Near Caves and in an icon of the Exaltation of the Holy Cross dating back to the 1700s, glauconite was used as a green pigment. In all the other icons, the green colour consists of a mixture of either vegetal blue (indigo) and yellow ochre – *The Venerable Anthony of Pechersk* and *The Venerable Theodosius of Pechersk* (1700), *Behold the Tabernacle of God*, *Behold the Men*, *The Archangel* (1720s –1730s); or of Prussian blue and yellow ochre – *Prince Vladimir/St Athanasius of Athos* (1730s), *The Annunciation* and *The New Testament Trinity* (1769) from the Church of the Exaltation of the Holy Cross, and *Slaughter of the Innocents* (1811). A verdigris pigment was identified in the paint layer of the icons from the iconostasis of the Church of Venerable Theodosius of Pechersk, in icons on wood from the local and plinth rows and icons on canvas from the back of the iconostasis of the Trinity Gate Church, (1734–1735).

Yellow. All icons on copper supports in the eighteenth century use gold leaf as an independent structural element of the colour layer to indicate the yellow colour. In the icons on wood dated to 1734–1735, *The Circumcision of the Lord*¹¹⁸ (from the Preserve's collection) and on copper dated to 1760–1762, *St Theodosius of Pechersk* (from the iconostasis of the Church of St Theodosius of Pechersk in the Far Caves) a lead-tin yellow pigment has been identified; in the icons on wood dated to the 1750s titled: *Unmercenary Saints, Healers and Miracle Workers* and *The Apostles Peter and Paul*,¹¹⁹ 1764; *The Venerable Anthony and Theodosius of Pechersk*, 1777; *The Holy Myrrh-Bearer*

¹⁰⁸ 30.5 × 26 × 2, wood, levkas, oil painting, KPL-Zh-551, the icon came from the Far Caves of the Kyiv Pechersk Lavra.

¹⁰⁹ 45.5 × 31.5 × 1.8, wood, levkas, oil painting, KPL-Zh-516, Received from St Catherine's Church of the Greek Monastery in Podol.

¹¹⁰ 135 × 103.5 × 2.8, wood, levkas, oil painting, KPL-Zh-780.

¹¹¹ 131 × 103 × 2.5, wood, levkas, oil painting, KPL-Zh-1715.

¹¹² 245 × 107 × 2, wood, levkas, oil painting, KPL-Zh-1778.

¹¹³ 41.2 × 29 × 2, wood, levkas, oil painting, KPL-Zh-138.

¹¹⁴ 34.5 × 27 × 2, wood, levkas, oil painting, KPL-Zh-312.

¹¹⁵ 41 × 29 × 2, wood, levkas, oil painting, KPL-Zh-447.

¹¹⁶ 34.5 × 27 × 2, wood, levkas, oil painting, KPL-Zh-2083.

¹¹⁷ 36 × 30 × 2, wood, levkas, oil painting, KPL-Zh-922.

¹¹⁸ 62.4 × 46.8 × 2, wood, levkas, oil painting, KPL-Zh-1463.

¹¹⁹ 36.5 × 27 × 2, wood, levkas, oil painting, KPL-Zh-2027.

Equal of the Apostles Mary Magdalene, 1850 and *Saint Anthony of Pechersk* – Neapolitan yellow pigment; in the icon on wood: *The Synaxis of the Apostles (of the Twelve)* from the St John the Evangelist chapel of the Cathedral of the Assumption – antimony tin yellow pigment. In an icon on copper *Slaughter of the Innocents*, 1811, from the Far Caves of the Kyiv-Pechersk Lavra, a mixture of lead white with yellow organic varnish was used for painting the yellow clothes. Lead chrome is identified as a yellow pigment in the icon on wood – *Christ and the Apostles* (1852).

Painting technique. The main specific feature of the painting technique used in the examined Kyiv icons dating from the late seventeenth to mid-nineteenth centuries is form modelling, rather than superimposing layers of paint, typical of traditional icon painting.¹²⁰ The colour of the ground layer is also actively involved in the form modelling process. When painting on a light ground, the painters started working out the shadows first. They did this on dark primers using basic colours (lead white, vermilion, ochre). They painting the protruding parts of the form first and in this way created the main paint layer. The necessary tonal gradation was achieved by using coloured gesso, which shows through the thin colour layer in the shadows. The resulting contrast of light and shade gave the faces of the depicted figures maximum 'vividness', and also helped to convey a certain emotional state. This was ultimately the main goal of the iconographer in creating an image. Kyiv artworks are distinguished by sufficient emotionality, which makes them similar to Greek and Serbian icons dating from the same period.

In painting the icons dated to 1691 from the local row of the old iconostasis of the Church of St Barlaam Pechersky in the Near Caves and the icons dated to 1700: *Christ the Almighty*, *Our Lady Hodegetria*, *Saint Anthony*, and *Saint Theodosius* the artist uses a dark ground as the easiest way to achieve a realistic rendering of intensive lighting and modelling. Another peculiarity of the painting technique used for the aforementioned icons is the large amount of binder in the colour layer, thanks to which a sfumato effect is achieved.

In the icons-medallions, inserts in the icon case of the Mother of God from the Cathedral of the Assumption – *Behold the Tabernacle of God*, *Behold the Men*; *Our Lady of Kupiatitsy*; *God the Father and The Archangels* – the artists paint on two layers of primer, the upper being lighter in colour. A quick preparatory painting, light red-brown in colour, is applied onto the lower layer, and then overlaid with a thin, transparent upper layer of ground – white gypsum – on which the image is directly modelled.¹²¹

The comparison and analysis of the painting technique of the faces of icons in the plinth row of the iconostasis of the Trinity Gate Church (1834–1835) and the group of icons from the Preserve collection showed the basic techniques of representation, typical of the Kyiv artworks: 1) a preliminary drawing, a cursory initial outline of the image, applied onto a light ground with a thin brush using liquid black paint. When the image is completed, this preparatory sketch is hidden, but it is possible to see it using infra-red photography; 2) the layer ('proplasmos' or 'sankir'), i.e. the background over which the elements of the paint layer are subsequently overlaid. The layer used is warm yet cool in tone; light brown and light olive in colour. The outline can be seen by visual inspection, under high magnification in the shadows and at the borders of the shapes; 3) the basic modelling layer of the faces, consisting of whitewash of different densities: pastous and dense in the light convex forms, and thin and transparent in the shadows. Blushes are woven into the pictorial fabric of the basic whitewash layer to emphasize the shape of the cheekbones and to complete the modelling. It is necessary to mention a certain symbolism in the choice of colour of the basic modelling layer – the faces of the Saviour, Mother of God and angels are painted in whitewash, the faces of mortals, in particular of men, in a light brown tone.

Although we do not consider it right to be hasty with a generalization of the materials available to us today (due to their relatively small number), we can nevertheless note that thanks to the research, it became possible to draw certain conclusions characterizing the specifics of the

¹²⁰ On the method of layering in medieval painting techniques, see: A. I. Yakovleva, 'Tekhnika ikonŭ', in: *Istoriya ikonopisi. Istoki. Traditsii. Sovremennost'*, ed. T. V. Moiseeva, Moscow 1986, pp. 29–40.

¹²¹ For the method of shining the preparatory painting through the top layer of the painting, see: *Ibid.*, pp. 78–79.

works of painting/iconography on metal, wooden supports and on canvas from the iconography workshops of the Kyiv-Pechersk Lavra.

Conclusion

The article provides a summary of paintings on metal supports from the collection of the National 'Kyiv-Pechersk Lavra' Preserve and the National Art Museum of Ukraine. On the basis of documentary evidence and the study of artworks in situ, a brief historical overview of the Kyiv tradition of painting on metal was made. There are more than 120 painted works on metal supports in the collections of the National 'Kyiv-Pechersk Lavra' Preserve, the earliest of which dates back to 1700 – these include five icons on copper from the iconostasis of the Church of the Exaltation of the Holy Cross in the Near Caves (St Anthony's) of the Kyiv-Pechersk Lavra, and the most recent are paintings on zinc sheets from the first half of the twentieth century by I. S. Izhakevich. The NAMU collection houses ten figurative depictions on zinc supports by S. Svetoslavsky on the subject of Tolstoy's novel *Prince Silver*. These were painted in 1905–1908 to decorate the interior of the house of S. Mogilevtsev, a timber merchant from Kyiv and two paintings in chamber format, also on zinc supports, by an unknown mid-nineteenth-century artist – *Portrait of a Woman* and *Mama's Coming* by I. S. Izhakevich. About 42 icons are dated to the eighteenth century. They are made on copper supports and typologically belong to the analogion double-sided icons or are small picturesque inserts for icon cases or hanging icons for chandeliers and cropped images that were used as candlesticks. Paintings on religious and secular themes made on zinc sheets by artists of academic training, G. K. Vigurov and I. S. Izhakevich, belong to the nineteenth – first quarter of the twentieth centuries. The stylistics, technique and technology of the icons made in the 1700s and throughout the eighteenth century are quite uniform, which suggests that the artworks belong to a single artistic centre with stable traditions – in this case, the Kyiv-Pechersk Lavra workshops. The Kyiv artists of the academic school of the nineteenth and early twentieth centuries continued the Kyiv tradition of painting on metal; their works are stamped in the individual manner of each master. The results of technical and technological studies of icons on copper supports executed in the 1700s and throughout the eighteenth century have revealed the use of a single-layer, glue-and-chalk, light, dark (black-and-grey) and colour ground, where mineral black pigment and ochre (red and yellow) were added as a filler, along with chalk, as well as double-layer ground (light and coloured). The pigments identified are quite diverse: lead whitewash, vermilion, ochre; blue pigments comprise azurite, smalt, vivianite, natural ultramarine, indigo and Prussian blue, green pigments include glauconite and verdigris, while the yellow palette covers Neapolitan yellow, antimony yellow, lead-tin yellow, and lead chrome. The palette of artists of the second half of the nineteenth century and the first quarter of the twentieth century was complemented with pigments corresponding to the time of their work: for example, cadmium yellow, lead chrome (the work by I. Izhakevich), cadmium yellow, cobalt green (the work by S. Svetoslavsky).

As a result of the comprehensive study of the preserved Kyiv paintings on metal supports, supplemented with data from artworks on wood and canvases from the National 'Kyiv-Pechersk Lavra' Preserve and National Art Museum of Ukraine, a significant range of works (about two hundred), having a fixed Kyiv origin and comprehensively studied, acquires the status of reference materials and become available for a wide range of researchers.

The authors are grateful to Vera Alekseyevna Raspopina, head of the department of physical and chemical research at the National Research Restoration Centre of Ukraine, for her many years of cooperation. The authors of the article express their gratitude to Denys Yashny, a leading researcher of the Department of Art Heritage Studies of the Kyiv-Pechersk Lavra National Reserve, for preparing the illustrations for publication. They are also grateful to Natalia Batenko, custodian of the first category of storage groups 'Archives', 'Photos' of the sector of preservation of monuments of fine art, books and documentary materials of the department of scientific and foundation work of the National 'Kyiv-Pechersk Lavra' Preserve for her advice and help.

Olga Ryzhova

In 2000 she graduated from the Faculty of Theory and History of Arts of the National Academy of Fine Arts and Architecture, Kyiv. Since 2000 she has been working in the field of scientific restoration and study of works of fine art. She participated in internships at leading museums and restoration institutions in Ukraine, Russia, Lithuania, and France. In 2013 she defended her Ph.D. on the topic 'Iconostasis of the Cathedral of St. Sophia of Kyiv in the context of the Kyiv icon-painting school of the eighteenth century', in 2020 she defended her doctoral dissertation on the topic "Icon painting in the Kyiv art culture of the late 17th – 18th centuries". She is the author of more than 100 academic publications. Research interests: Kyiv, Kyiv-Pechersk Lavra, iconography, style, primary sources, research of technique and technology, restoration.

Olga Ryzhova

W 2000 roku ukończyła Wydział Teorii i Historii Sztuki Narodowej Akademii Sztuk Pięknych i Architektury w Kijowie. Od 2000 roku pracuje w dziedzinie naukowej renowacji i badania dzieł sztuki. Odbyla staże w prestiżowych muzeach i instytucjach konserwatorskich na Ukrainie, w Rosji, na Litwie i we Francji. W 2013 roku obroniła doktorat: „Ikonostasy kijowskiej katedry św. Zofii w kontekście kijowskiej szkoły malarstwa ikonowego XVIII wieku”, w 2020 roku obroniła habilitację na temat malarstwa ikonowego w kijowskiej kulturze artystycznej końca XVII–XVIII wieku. Jest autorką ponad 100 publikacji naukowych. Zainteresowania badawcze: Kijów, Ławra Kijowsko-Pieczerska, ikonografia, styl, źródła pierwotne, badania techniki i technologii, konserwacja.

Inna Ivakina

Head of the Department for the Protection of Monuments of Fine Arts, Books and Documents of the National Preserve 'Kyiv-Pechersk Lavra', Kyiv, Ukraine. In 2008, she graduated from the Faculty of History of Fine and Decorative Arts of the State Academy of Management of Culture and Arts, Kyiv. Since 2011, she has been working in the field of preservation, study and popularization of works of fine art in the Reserve's stock collection (sixteenth to twenty-first centuries). She gave special lectures on art for cultural workers, curator of thematic exhibitions and author and co-author of more than 25 academic publications in the field of art history, technical and technological research of works of fine art, and restoration. Research interests: museology, protection of cultural heritage, preservation, study and popularization of artistic works of painting in the Reserve's stock collection, icons seventeenth to twentieth centuries: iconography, style, primary sources, research of technique and technology, restoration.

Inna Ivakina

Kierownik Wydziału Ochrony Zabytków Sztuk Pięknych, Książek i Dokumentów Narodowego Rezerwatu „Ławra Kijowsko-Pieczerska” w Kijowie. W 2008 roku ukończyła Wydział Historii Sztuk Pięknych i Dekoracyjnych Państwowej Akademii Zarządzania Kulturą i Sztuką w Kijowie. Od 2011 roku zajmuje się konserwacją, badaniem i popularyzacją dzieł sztuki z kolekcji rezerwatu (XVI–XXI wiek). Kurator wystaw tematycznych oraz autorka i współautorka ponad 25 publikacji naukowych z zakresu historii sztuki, badań technicznych i technologicznych dzieł sztuki plastycznej oraz konserwatorstwa. Prowadziła wykłady specjalistyczne z zakresu sztuki dla pracowników kultury. Zainteresowania badawcze: muzealnictwo, ochrona dziedzictwa kulturowego, konserwacja, badanie i popularyzacja dzieł malarstwa artystycznego w zbiorach rezerwatu, ikony XVII–XX wieku – ikonografia, styl, źródła pierwotne, badania techniki i technologii, konserwacja.

Bibliography

Archival sources

Natsional'nyj Kyjevo-Pecherskyj istoryko-kul'turnyj zapovidnyk (NKPIKZ), KPL-A-NVF-400–405, *Proektnye predlozheniya i otchet o restavratsyi ikonostasa Troitskoï Nadvratnoï tserkvi KPL. 1983–1984*, vols. 1–5.

Literature

Aleppskii P., arkhidiakon, *Puteshestvie Antiokhiïskogo patriarkha Makariya v Rossiyu v polovine XVII veka, opisannoe ego synom, arkhidiakonom Pavlom Aleppskim (po rukopisi Moskovskogo glavnogo arkhiva Ministerstva inostrannykh del)*, trans. by G. Murkos, vol. 2, *Ot Dnestra do Moskvÿ*, Moscow 1897.

Belilov'ska A. V., Gaha-Szeremetieva S. V., Marchenko G. A., Onoprienko N. O.

Chernenko A. V., *Ikonostas tserkvy Rizdva Khrystova z Dal'nikh pecher Kyjevo-Pechers'koi' lavry. Doslidzhennia ta restavratsii?* Naukovo-doslidna robota, no. ДР 0116U005210, Natsional'nyj Kyjevo-Pechers'kyj istoryko-kul'turnyj zapovidnyk, Kyiv 2018, typescript in NKPIKZ.

'Glavnaya tserkovnaya i riznichnaya opis' Dal'nikh peshcher Kievo-Pecherskoï Lavry, sostavlenneya v 1893 g', *Lavr's'kyï al'manakh* 2012, no. 27, pp. 8–16.

Gomberg-Vierzhbinskaya E. P., Podkopaeva Yu. P. (ed.), Mikhail Aleksandrovich Vrubel. *Perepiska. Vospominaniya o khudozhnike*. Moscow 1963.

Grenberg Yu., *Ot fayumskogo portreta do postimpressionizma. Istoriya tekhnologii stankovoï zhivopisi*, Moscow, 2003.

Yaroslavtseva N. A. (ed.), *Viktor Mikhailovich Vasnetsov. Pisma. Dnevnik. Vospominaniya. Suzhdeniya sovremennikov*, Moscow 1987.

Kolektsiya NCHMU, katalog, Natsional'nyj khudozhnij muzej Ukraïny, issue 1, *Zhyvopys XIX – pochatku XX stolittya*, Kyiv 2009, pp. 100–115.

Kondratyuk A. Yu., *Monumentalnyj zhyvopys Troi'ts'koi' nadbramnoi' tserkvy Kyjevo-Pechers'koi' lavry*, Kyiv 2005.

Kolpakova V., 'Pidzemna obitel', in: *Skarby Kyjevo-Pechers'koi' lavry*, ed. by O. Koval, Kyiv 1998, pp. 63–90. <https://violity.com/101634697-skarbi-kiyevo-pecherskoyi-lavri-albom-1998-god-tirazh-10-000> (accessed: 15/03/2023).

Leskov N. S., 'Melochi arkhireïskoï zhizni', in: Leskov N. S., *Sobranie sochinenii*, vol. 6, Moscow 1956, pp. 450–453.

Litvinenko Ya. V., 'Peshchernye ikonostas'y v svete arkhivnykh issledovaniï', in: *Tserkva – nauka – suspil'stvo: pytannya vzajemodii*. *Proceedings of 10th International Scientific Conference*, National Scientific Research and Restoration Center of Ukraine, Kyiv 2012, 30 May –1 June, pp. 181–184.

Lopukhina O. V., 'Ikonopysna shkola Kyjevo-Pechers'koi' lavry XIX – pochatku XX st. Khudozhni priorityety, praktychni zavdannya, osvita ta vykhovannya', in: *Tserkva – nauka – suspil'stvo: pytannya vzajemodii*. *Proceedings of 11th International Scientific Conference*, National Scientific Research and Restoration Center of Ukraine, Kyiv 2013, May 29–31, pp. 181–184.

Lopukhina O. V., 'Ikony prepodobnykh u pecherakh – tvory ikonopysnoi' majsterni Kyjevo-Pechers'koi' lavry 1840–1850-kh rr.', in: *Mogylyans'ki chytannya 2012 roku*, ed. V. Kolpakova [et al.], Kyiv 2013, pp. 272–276.

Lytvynenko Ya. V., 'Ikonostas tserkvy prepodobnogo Antoniya Pechers'kogo v Blyzhnikh pecherakh Kyjevo-Pechers'koi' lavry', *Pytannya istorii nauky i tekhniki* 2018, no. 2, pp. 66–72.

Lytvynenko Ya. V., 'Ikonostasy i monumentalnyj zhyvopys lavrs'kykh pecher. Datuvannya, atrybutsiya, vtraty, ponovlennya', *Lavrs'kyij al'manakh* 2012, no. 27, pp. 306–337.

Marchenko A. A., 'Issledovanie i atributsiya ikony "Sobor 12 apostolov" na mednoi' osnove nachala XX veka', in: *Èkspertiza i atributsiya proizvedeniï izobrazitel'nogo i dekorativno-prikladnogo iskusstva. Proceedings of 17th and 18th Scientific Conferences*, Moscow 2011, 23–25 November, 2012, 21–23 November, Moscow 2015, pp. 246–252.

Marchenko G. A., 'Ikony na metali z fasadu Trapeznoyi tserkvy Prpp. Antoniya ta Feodosiya Pechers'kykh Kyjevo-Pechers'koyi lavry. Suchasnyi stan zberezheniya', in: *Mogylyans'ki chytannya 2012 roku*, ed. by V. Kolpakova [et al.], Kyiv 2013, pp. 465–469.

Marchenko G. A., 'Zhivopis' na metalle. Problemy issledovaniya i restavratsii (na primere pamyatnikov iz kolektsii Natsional'nogo Kievo-Pecherskogo istoriko-kul'turnogo zapovednika)', in: *Issledovaniya v konservatsii kul'turnogo naslediya*, issue 3, *Materialy mezhdunarodnoi' nauchno-metodicheskoi' konferentsiyi*, Moscow 2012, pp. 155–160.

Marchenko G. A., 'Ikony na metali z vivtarya Khrestovozdvizhens'koi' tserkvy Kyjevo-Pechers'koi' lavry', in: *Muzei' ta restavratsiya u konteksti zberezheniya kul'turnoi' spadshchyny. Aktual'ni vyklyky suchasnosti. Proceedings of 4th International Scientific and Practical conference*, ed. by O. V. Rudnyk [et al.], Kyiv 2019, 6–7 March, pp. 145–158.

Marchenko G. A., 'Utochnennya pokhodzhennya ta atrybutsiya ryadu ikon z vivtarnykh chastyn Uspens'kogo soboru Kyjevo-Pechers'koi' lavry v kolektsii' Natsional'nogo Kyjevo-Pechers'kogo istoriko-kul'turnogo zapovidnyka', in: *Mogylyans'ki chytannya 2018 roku*, ed. by V. Kolpakova [et al.], Kyiv 2018, pp. 152–158.

Marchenko G. A., Onoprijenko N. O., 'Typologiya midnykh osnov ikon Kyjevo-Pechers'koi' Lavry XVIII v', in: *Muzei' ta restavratsiya u konteksti zberezheniya kul'turnoi' spadshchyny. Proceedings of Scientific Conference*, ed. V. H. Chernets' [et al.], Kyiv 2016, pp. 73–77.

Marchenko G. A., Onoprijenko N. O., 'Z dosvidu restavratsii' ikon na tsynkovykh osnovakh', in: *Doslidzhennya, konservatsija, restavratsija rukhomykh pam'atok istoriyi ta kul'tury. Tradytsiyi, innovatsiyi. Report on Proceedings of 10th Scientific and Practical Conference*, Kyiv 2016, 24–27 May, Kyiv 2016, 24–27 May, pp. 195–201.

Marchenko G. A., Raspopina V. O., 'Doslidzhennya ikon ikonostasu tserkvy Rizdva Khrystovogo u Dal'nikh pecherakh Kyjevo-Pechers'koi' lavry', in: *Doslidzhennya, konservatsiya, restavratsiya rukhomykh pam'atok istorii' ta kul'tury. Tradytsii', innovatsii*. *Report on Proceedings of 10th International Scientific and Practical conferences*, Kyiv 2016, 24–27 May, Kyiv 2016, 24–27 May, Kyiv 2016, pp. 202–207.

Marchenko G. A., Raspopina V. O., 'Restavratsiya ta doslidzhennya ikony "Lyky sv. Apostoliv" z ikonostas tserkvy Rizdva Khrystovogo. Dal'ni pechery Kyjevo-Pechers'koi' lavry. Nespodivani vidkryttya', in: *Mogylyans'ki chytannya 2015 roku*, ed. by V. Kolpakova [et al.], Kyiv 2016, pp. 249–255.

Pitateleva O., 'Monumentalnyj zhyvopys ta ikonopys G. I. Popova v Lavrs'kij Trapeznij palati ta tserkvi', in: *Lavrs'ki mystectvoznavchi studii*, Kyiv 2015, pp. 51–97.

- Posternak O. P., 'Religioznaya zhivopis' na metalle: istoriya i tekhnologiya', in: *Tekhniki i tekhnologii v sakral'nom iskusstve. Khristianskii mir. Ot drevnosti k sovremennosti*, ed. by A. V. Rýndina, Moscow 2012, pp. 143–162.
- Posternak O. P., 'Zhivopis' na metalle: istoriya býtovaniya, tekhnologiya, restavratsiya', in: *Ékspertiza i atributsiya proizvedenii izobrazitel'nogo iskusstva. Proceedings of 12th Scientific Conference*, Moscow 2009, pp. 123–130.
- Ryzhova O., 'Doslidzhennya ikony "Bogorodytsya Odygitriya" (Troitse-Il'ins'ka) z koleksiji Natsional'nogo Kyjevo-Pechers'kogo istoriko-kul'turnogo zapovidnyka', *Visnyk Derzhavnoi' akademii' kerivnyh kadriv kul'tury i mystetstv* 2018, no. 2, pp. 266–269.
- Ryzhova O., 'Doslidzhennya ta atributsiya ikony "Svyati bezsribnyky, tsilyteli i chudotvortsy" z koleksii Natsional'nogo Kyjevo-Pechers'kogo istoriko-kul'turnogo zapovidnyka', *Traditions and novations of the higher architectonic and art education* 2017, no. 4, pp. 105–110.
- Ryzhova O., 'Doslidzhennya ta atributsiya ikon "Triysya Novozavitna" ta "Blagovishchenniya" z koleksii Natsional'nogo Kyjevo-Pechers'kogo istoriko-kul'turnogo zapovidnyka', *Bulletin of Kharkiv State Academy of Design and Arts* 2017, no. 4, pp. 75–80.
- Ryzhova O., *Ikonops u khudozhnij kul'turi Kyjeva kintsya XVII–XVIII stolit'*, Kyiv 2020.
- Ryzhova O., 'Osoblyvosti ikonografii' zobrazhen' na ikonakh z Uspens'kogo soboru Kyjevo-Pechers'koi' Svyato-Uspens'koi' Lavry', *Visnyk Derzhavnoi' akademii' kerivnyh kadriv kul'tury i mystetstv* 2015, no. 4, pp. 83–88.
- Rýzhova O., 'Raskrytie ikonŷ na metalle Blagoveshchenie (iz fondov Natsional'nogo Kievo-Pecherskogo istoriko-kul'turnogo zapovednika)', in: *Mogylyans'ki chytannya 2008 roku*, ed. by V. Kolpakova [et al.], Kyiv 2009, pp. 549–553.
- Ryzhova O., 'Tekhnologichni osoblyvosti zhyvopysu ikon XVIII st. Kyjevs'kogo pokhodzhennya', *Visnyk Derzhavnoi' akademii' kerivnykh kadriv kul'tury i mystetstv* 2012, no. 2, pp. 157–161.
- Rýzhova O., Raspopina V., Ikonŷ Kieva XVIII veka iz koleksii Natsional'nogo Kievo-Pecherskogo istoriko-kul'turnogo zapovednika. Issledovaniya i atributsiya, in: *Doslidzhennya, konservatsiya ta restavratsiya muzejnyh pam'yatok: dosyagnennya, tendentsii' rozvytku. Proceedings of 9th International Scientific and Practical Conference*, National Scientific Research and Restoration Center of Ukraine, Kyiv 2013, 27–31 May, pp. 333–335.
- Rýzhova O., Raspopina V., 'Issledovanie i restavratsiya Portreta arkhimandrita Kievo-Pecherskogo monastýrya Eliseya Pletenetskogo i Portreta mitropolita Petra Mogily iz fondov Natsional'nogo Kievo-Pecherskogo zapovednika', in: *Issledovaniya v konsiervatsii kul'turnogo naslediya. Proceedings of International Scientific and Practical Conference*, issue 3, Moscow 2012, pp. 253–257.
- Rýzhova O., Raspopina V., 'Podpisnaya ikona Ivana Kosachinskogo Aleksii Chelovek Bozhii iz koleksii Natsional'nogo Kievo-Pecherskogo istoriko-kul'turnogo zapovednika', in: *Ékspertiza i atributsiya proizvedenii izobrazitel'nogo i dekorativno-prikladnogo iskusstva. Proceedings of 17th and 18th scientific conferences*, Moscow 2011, 23–25 November, 2012, 21–23 November, Moscow 2015, pp. 237–240.
- Rýzhova O., Raspopina V., 'Tekhniko-tekhnologicheskie osobennosti ikon Kievo-Pecherskoï Lavry XVIII veka iz koleksii Natsional'nogo Kievo-Pecherskogo istoriko-kul'turnogo zapovednika', in: *Ékspertiza i atributsiya proizvedenii izobrazitel'nogo i dekorativno-prikladnogo iskusstva. Proceedings of 17th and 18th scientific conferences*, Moscow, 2011, 23–25 November, 2012, 21–23 November, Moscow 2015, pp. 26–33.
- Rýzhova O., Raspopina V., 'Tekhnologicheskoe issledovanie zhivopisnykh proizvedenii S. Svetoslavskogo iz koleksii Natsional'nogo khudozhestvennogo muzeya Ukrainy', in: *Ékspertiza i atributsiya proizvedenii izobrazitel'nogo iskusstva. Proceedings of 14th Scientific Conference*, 2008, 26–28 November, Moscow 2009, pp. 26–28
- Rýzhova O., Raspopina V., Izotov A. A., Soroka E. A. 'Rezultaty kompleksnykh naturnykh issledovaniï ikon iz fondov koleksii NKPIZ', in: *Tserkva – nauka – suspil'stvo: pytannya vzajemodii'*. *Proceedings of 10th International Scientific Conference*, National Scientific Research and Restoration Center of Ukraine, Kyiv 2012, 30 May – 1 June, pp. 197–200.
- Shydenko V. A., 'Ikonostasŷ tserkveï, nakhodyashchikhsya v Dal'nikh peshcherakh Kievo-Pecherskoï Lavry', *Lavrskij al'manakh* 2009, no. 23, pp. 124–137.
- Tananaeva L., *Sarmatskii portret. Iz istorii pol'skogo portreta epokhi barokko*, Moscow 1979.
- Tarabukin N., *Mikhail Aleksandrovich Vrubel*, Moscow 1974.
- 'Tekhnologichni dani zhyvopysnykh tvoriv', in: *Koleksija NCHMU*, katalog, National Art Museum of Ukraine, issue. 2, *Zhyvopys XIX – pochatku XX stolittia*, ed. by L. V. Tolstova [et al.], Kyiv 2012, pp. 102–123.
- Tolstova L. V., 'K voprosu o proiskhozhdenii desyati panno S. Svetoslavskogo iz Koleksii Natsional'nogo khudozhestvennogo muzeya Ukrainy', in: *Ékspertiza i atributsiya proizvedenii izobrazitel'nogo iskusstva. Proceedings of 4th Scientific Conference*, 2008, 26–28 November, Moscow 2009, pp. 29–33.

Yakovleva A. I., ‘Tekhnika ikonŷ’, in: *Istoriya ikonopisi. Istoki. Traditsii. Sovremennost’*, ed. by T. V. Moiseeva, Moscow 1986, pp. 29–40.

Internet sources

Paston E. V., ‘Sobornŷi ideal Vasnetsova. Rabota khudozhnika vo Vladimirskom sobore v Kieve (1885–1896)’, *Vestnik Pravoslavnogo Svyato-Tikhvinskogo gumanitarnogo universiteta*”, seria V, *Voprosŷ istorii i teorii khristianskogo iskusstva* 2019, issue 36, pp. 151–162, <https://periodical.pstgu.ru/ru/series/issue/5/36/article/7089> (accessed: 15/03/2023).

Stepanova S. S., ‘Khudozhestvennaya programma rospiseŷ Vladimirskogo sobora v Kieve’, *Vestnik slavyanskikh kul’tur* 2016, vol. 39, no. 1, pp. 150–161, <https://cyberleninka.ru/article/n/hudozhestvennaya-programma-rospisey-vladimirskogo-sobora-v-kieve> (accessed: 15/03/2023).

Acknowledgements

The authors of the article also thank Lesya Vladimirovna Tolstova, Deputy General Director for Scientific Work of the National Art Museum of Ukraine, for providing photographs of the exhibits.