

EWOLUCJA POLICHROMII W ARCHITEKTURZE LWOWA W OKRESIE OD XIV WIEKU DO PIERWSZEJ POŁOWY XVII WIEKU

EVOLUTION OF THE POLYCHROMY IN LVIV ARCHITECTURE OF THE 14TH – THE FIRST HALF OF THE 17TH CENTURY

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STRESZCZENIE

W artykule analizuje się ewolucję polichromii w architekturze Lwowa w okresie od XIV wieku do pierwszej połowy XVII wieku. Na podstawie historyczno-terenowych badań autor analizuje technikę polichromii, palety kolorów i podstawowe zasady i cechy wykorzystania polichromii na elewacjach i we wnętrzach budynków lwowskich okresu gotyku i renesansu.

Słowa kluczowe: elewacja i wnętrza budynków lwowskich okresu gotyku i renesansu, ewolucja polichromii w architekturze, techniki polichromii i zasady ich wykorzystania.

ABSTRACT

The article deals with the question of the evolution of the polychromy in Lviv architecture of the 14th – the first half of the 17th century. On the base of field and historical research, the author considers the polychrome techniques, color palette and the main laws and peculiarities of polychromy use in the façade and interiors of Lviv buildings of the period of Gothic and Renaissance.

Key words: evolution of the polychromy in architecture, façade and interiors of Lviv buildings of the period of Gothic and Renaissance, polychrome techniques and laws of their use.

1. INTRODUCTION

As it well known, the polychromy is multicolored decoration of the façade or interior spaces, which is painted or made in different techniques. Certain color palette and chosen polychrome techniques characterized the architecture of each period and style. The polychromy types (architectural, building and painting) [3], its different techniques (e.g. stained glass, paintings, majolica etc.) are the important mean of architectural expression of the façade or interior of the building. On the other hand the polychromy in the architecture or art, namely the color palette, the range of color use, the chosen techniques direct us to define the style.

The city of Lviv represents the perfect model for the research of any phenomenon in the process of styles evolution. The outstanding architects, sculptors and painters of different schools and nations created the historical architecture of Lviv. Therefore, Lviv architecture of the 14th – the 1st third of the 20th centuries represents the whole palette of architectural styles from Gothic to Functionalism.

The polychromy is one of the most changeable characteristics of object that depends on style, the client's taste or the preferences of the next owners. Besides atmosphere factors and environment pollution cause the negative influence. Unfortunately, the furthest period of the Late Gothic and the Renaissance preserves few examples of the authentic polychromy because of the numerous repairs, reconstructions and restorations. In particular, the Baroque style as a very intolerant to the previous periods transformed the earliest authentic interiors by its illusive paintings as e.g., Latin Cathedral and Bernardine Church. The method of the 19th century – the clearing of the façade surface and its covering with the gray cement plaster – ruined the polychromy of the historical Lviv buildings. Information about the polychromy of Lviv buildings of the 14th – the 1st half of the 17th century we gained through the soundings of plaster and stone surfaces, the research of sunken parts of sculptural and architectural decoration where the small pieces of dye exist. Therefore, the scholars did not consider the problem of polychromy of Lviv Gothic and Renaissance buildings because of the lack of objects for research and the dominance of preserved polychromy of later styles (Baroque, Picturesque style, Secession).

Now in the internet sources we can meet the concept of 'Lviv polychromy' relating to the façades of the 16th–17th century in the Market Square. They say that each façade has each own color but in the 19th century, the Austrian authorities ordered to repaint it into gray. In 1980-s the institute 'Ukrzakhidroekrestavratsiia' (The West Ukrainian Project Institute of Conservation) restored the polychromy of the façades and few interiors of the Market Square. However, as we can see from further research that conservators sometimes held their work not so much for soundings as for common concepts about the correspondence of the color and the style.

Besides we can meet the often reminiscences about the polychromy of Lviv buildings of that time in the articles of Lviv historian Volodymyr Vuitsyk, which were based on archive research [10]. In addition, the conservators of above-mentioned Institute Myroslava Maiorchuk and Kost Prysiazhnyi investigated the polychromy of Gothic and Renaissance architecture in Ukraine, including Lviv, Kolomyia and Uzshhorod [8, 9] on the base of field research. Volodymyr Liubchenko considered some aspects of the polychromy of Lviv Renaissance sculpture [6].

In the article the author made the first attempt of the complex description and analysis of the preserved polychromy of Lviv buildings of the 16th – the 1st half of the 17th centuries namely the Gothic and the Renaissance. The author made the conclusions on the base of field research of preserved polychrome fragments, of bibliographical and archives research. The tasks of the article did not include the analysis of used pigments or dye solutions because of the lack of information, so that must be the subject of especial research.

2. EVOLUTION OF POLYCHROMY IN LVIV GOTHIC ARCHITECTURE (THE 14TH – THE FIRST HALF OF THE 16TH CENTURY

Because of the numerous fires in the 16th century, we have little information about Lviv Gothic. According to analogues, we can suggest that the buildings were half- or full-timbered with brick filling. In half-timbered houses, the ground floor was made of stone. The preserved firewalls of Lviv buildings of the 14th–15th century were constructed in the so-called Flemish (or Polish) bonding, and the lower parts of the walls (in the cellars as e.g. in houses in the Market Square [4]) – in even older ‘Gothic bonding’ (or Double-Flemish). In Gothic, plaster did not cover brick masonry demonstrating its decorative surface. Sometimes bond incorporates stretchers of red color and headers of another, namely which were color-glazed or strongly baked (e.g., as walls of the Tower of City Arsenal (Fig. 1)). Special shaped joints were pink because of adding of crushed bricks to the lime mortar. The constructive elements such as basements, corners, buttresses were made from dressed blocks of limestone or sandstone. In addition, the masons used stone blocks or glazed shaped bricks to underline the importance of door and window frames. The preserved stone gothic details demonstrate us the polychromy traces, namely of red, blue paints and gilding¹. For the reasons of conservation, the stone or brick masonry could be covered with the thin layer of lime plaster, which did not hide the wall surface texture. Namely, the gothic masonry of John the Baptist Church (the 14th century) was covered with the ancient type of plaster found under later layers. Similarly, the conservators of the ancient parts of Church of St. Onuphrius found few lime plaster layers made above the gothic masonry. The analogue plaster layer painted in dark red the conservators reveal on the walls of City Arsenal. As Lviv chronicles say, special workers employed by city (named ‘lepiarzy’) constantly plastered and painted the walls of city fortification.



Fig. 1. The Gothic bonding with strongly baked heads (the Tower near City Arsenal). Source: photo by author

As the archeological finds show, muff glass and crown glass were the types used in the windows of Lviv gothic houses; stained glass decorated churches windows. Namely, archeologists had found the fragments of gothic stained glass during the excavations at Latin Cathedral. The unique preserved paintings *a la fresco* of the end of the 14th – the beginning of the 15th centuries in the interior of Armenian Cathedral proved that there was a wide spread practice. The floor was paved with baked bricks in *opus spicatum*.

¹ The students-conservators of Lviv Polytechnic National University under the guidance of assoc. prof. Oleh Rybchynskyi had researched and restored the polychromy of some gothic sandstone details.

3. EVOLUTION OF POLYCHROMY IN LVIV RENAISSANCE ARCHITECTURE (THE II HALF OF THE 16TH – THE I HALF OF THE 17TH CENTURIES)

After the fire in 1527 that destroyed Gothic buildings, Lviv was entirely rebuilt in Renaissance style. Local building traditions combined with building practice of Italian and German architects. The tradition of building from limestone and bricks continued in Renaissance. The masons construct the ground floor of the façade in stone, and the upper floors – in bricks. The colored plaster covered the masonry because the Renaissance aesthetic did not highly estimated geometrical ornaments of open brick masonry, which also had lost its perfectness. Door and window frames were made in stone, which was also colored. The *architectural polychromy* characterized the Renaissance style, so color underlined the constructive or decorative elements of the façade or interior. As a rule, the façade surface was covered with plaster of the certain color and the door and windows frames were painted in contrast colors. The research and unique restoration of the façade polychrome of the house in 2 Ruska Str. (arch. M. Rybenchuk, 1998) proved this concept. Namely, the façade surface was painted in light-ocher color; stone window frames are white with red and green details (Fig. 2).



Fig. 2. Restoration of the renaissance façade polychromy with the sounding of gothic brick masonry (2, Ruska Str.) Source: photos by author

Few fragments of the polychromy were found during the research and restoration of Renaissance Lviv city houses. In 2015, the research of the facade polychromy of the house in 28, Market Square was held. The researchers have found 22 layers of paints, the first of which was ivory color (similar to the sandstone color), and then ochre, olive, blue, gray, orange colors can be noticed (Fig. 3). The red color appears only in the 20th century (Fig. 4). We can see the identity with the researched facades of the houses in 2, Ruska Str. and 2, Market Square (Bandinelli Palace²) which also have light-ochre painting (Fig. 5). Obviously, three facades do not make the rule but we can suggest that this is the peculiarity of Lviv Renaissance polychromy (in opposite to well-known thesis about the red background in Renaissance according to which the painting without previous research often have been made). Therefore during the restoration works in 1980-s the façade in 28, Market Square was painted in red though the red color was not found out at all among paint layers.

² According to the research of Lidiia Hornytska's restoration workshop, the façade of Bandinelli palace did not preserve the authentic polychromy because of numerous repair and restoration works of the 19th–20th century. However, the layers of light ochre (or ivory) paint have covered the gothic brick masonry of the firewall in the courtyard. Therefore, the restorers choose the light ochre for coloring the façade.

Turning back to the façade in 28, Market Square, it is necessary to say that the polychromy of the stone details merely did not preserve (obviously because of the cleaning and plastering with cement mortar of the facades of Market Square in 19th century). Nevertheless, under the wide plaster layer among the windows of the second and third floors the conservators found out the stone rustication with black sunken outline (Fig. 6). These paintings are consistent with light-ochre painting of the façade in the period of Renaissance. In addition, on the left window stone frame on the second floor the restorers found out traces of orange paint or cinnabar (on the woman mask and rings in lions mouths) (Fig. 7), green paint (on the headdress of that mask) and ochre paint (on the lion's face). Probably, the orange paint served as a primer for the gilding. However, the cleaning of the other stone details (namely door and window frames, cornices) showed total black painting creating the layer located over mentioned multicolored layer (Fig. 7). Obviously that was the painting of all stone details of the next polychromy stage, probably which incorporated with olive façade surface³. Such concept corresponds with the contrast baroque color scheme of the façade [2]. According to these soundings the authentic polychromy of the façade in the 16th century looked quite different from the restoration of 1980-s.



Fig. 3. Sounding of painting layers of the façade in 28, Market Square (the second floor). The first layer of paint was light ochre (ivory) color similar to the sandstone color. Source: photo by author



Fig. 4. Sounding of painting layers of the façade in 28, Market Square. The red color appears only in the 20th century. Source: photo by author



Fig. 5. The restoration of the polychromy of the facades in 28, Market Square (1980-s) and in 2, Market Square (2000-s). Source: photo by author

³ Only precise chemical analysis and the clearing of the larger area of the façade that unfortunately has no funding now can verify all these suggestions about polychromy stages and the certain color palette.



Fig. 6. The soundings of the authentic polychromy of the sandstone details (28, Market Square) – the black outline of the rustication. Source: photo by author



Fig. 7. The soundings of the authentic polychromy of the sandstone details (28, Market Square) – the orange paint on the mask (the 1st period of polychromy) and complete black painting (the 2nd period of polychromy). Source: photo by author

According to statements of the researcher of Lviv architecture A. Saliuk the facades of Boims Chapel were polychrome, the soundings revealed the existence of four painting layers. In time of restoration of City Arsenal, the conservators found the traces of painting with warm and cool tones of red on the wall and window jambs (Fig. 8). The inscriptions and the eagle on the façade of City Arsenal were gilded. In archive materials, historian V. Vuitsyk read repeatedly about the painting works held in 1632, 1668, 1670 and 1671. He even found the painter's name that worked in City Arsenal – Andrii [10, p. 104–109]. Also in red, they painted the sunken arches of Korniakt Tower and the façade of Armenian Lombard (Fig. 9)⁴. According to assertion of V. Vuitsyk the facades of Black House and Assumption Church were polychrome namely triglyphs and metopes have traces of red, green, blue and gold paints.

The lack of systematic field research of the polychromy of Lviv Renaissance buildings give a possibility only to represent some facts, which prove the concept of multi colored Renaissance architecture but are insufficient to make detail conclusions. So when author (with O. Bilinska and K. Prysiashnyi) made the research of polychromy of the rear façade

⁴ According to the research of the institute 'Ukrzakhidproektrestavratsiia'.

of the house 44, Market Square we revealed the numerous traces of the layers of blue paint on the wall (which corresponds with Jewish tradition) and small particles of gilding on the stone window frames.

Unfortunately, the use of white lead had caused the darkening of all stone details of Lviv facades e.g. Boims Chapel or the ensemble of Assumption Church. So was the cause of creation of Black House façade which legend supported by the latest paintings in black⁵.



Fig. 8. The restoration of the polychromy of the façade surface and stone details of City Arsenal. Source: photo by author



Fig. 9. The restoration of red façade surface and iron shutters of Armenian Lombard. Source: photo by author

The Renaissance interior also was intensively polychrome. As building polychromy so painting polychromy were used. According to Estrejcher [3] the *building polychromy* is using of natural colors of building materials. The alabaster *inlay* combined with sandstone surface became the most popular in Lviv. Alabaster elements were inserted in geometrical sandstone ornament; also, alabaster flowers decorated arches and medallions – columns (the rooms on the second floor of Bandinelli Palace) (Fig. 10). Kampians Chapel represented the perfect example of the polychrome renaissance interior where architectural and painting decoration of the wall completely consists in combination of marble, alabaster and sand stone (Fig. 11). The *architectural polychromy* in Renaissance was widespread. All architectural elements of the interior (stone elements, brick walls, brick walls, wooden beams) were painted. That is proved by complex researches of the interiors of houses 37, Market Square, 2, Market Square, 2, Drukarska Str., which should be viewed in details.

Interior spaces of the first floor of the house 37 in Market Square represent an extraordinary rich and diverse polychrome palette. The workshop of above mentioned institute 'Ukrzakhidproektrestavratsiia' (author M. Maiorchuk) have made this systematic and detail research in 1980-s [1]. Another precedent of such a detail research and the next restoration works does not exist in Lviv architecture⁶. Therefore, sandstone window columns and jambs were painted in combination of dark red (the low part of the column's shaft, jambs), blue (the upper part of the column's shaft) and ocher in details. The column base and capital astragals were gilded. The diamond rustication of the sandstone portal is painted in white on the red and blue background. Another shaped portal is painted in dark red with gilded moldings. The restorers found the authentic ornamental door painting with the combination of ocher and blue colors. The walls in different rooms have dark red, blue and cerulean painting (Fig. 12). The research of the polychromy of the wooden beams

⁵ During the last coloring of the façade, the restorers used Caparol paint that caused the destruction of the authentic stone surface because of the lack of vapor permeability.

⁶ This restoration of the polychromy was destroyed in 2011 when the owner completely had cleaned all sandstone elements, had repainted the walls and beams according to his taste (Fig. 14).

revealed the traces of pale blue, pale ocher (peach), black and white paints. The central beam was painted in pale blue and the other beams were painted in white with mentioned colors of moldings (Fig. 13, 14).

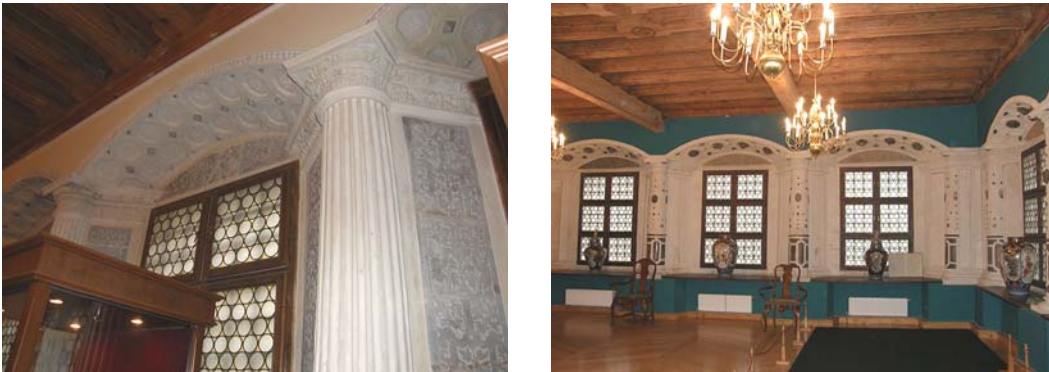


Fig. 10. The alabaster inlay combined with sandstone surface of the window columns in the interior (II floor, Bandinelli Palace). Source: photo by author



Fig. 11. Interior polychromy consists in inlay of marble, alabaster and sand stone (Kampians Chapel). Source: photo by author

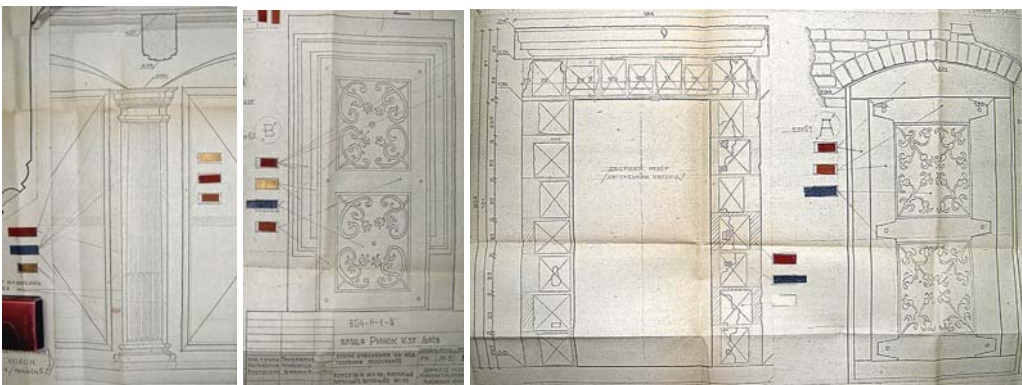


Fig. 12. The alabaster inlay combined with sandstone surface of the window columns in the interior (II floor, Bandinelli Palace). Source: photo by author

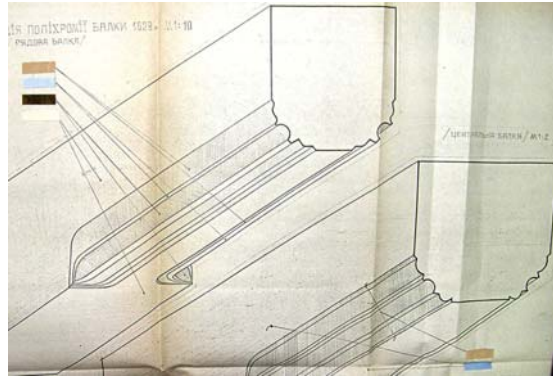


Fig. 13. The research and restoration of the polychromy of the wooden beams (the first floor, 37, Market Square). Source: [1]



Fig. 14. The modern destruction of restored polychromy (the first floor, 37, Market Square). Source: photo by author

The restoration of the house in 2, Market Square gave the possibility for basically research of the authentic interior polychromy [7]. On the first floor restorers found that the walls of one room were painted in pale gray with frame, of another room – in gray and blue color and the vaults – in light ochre with white frame, which corresponds with renaissance period. Unfortunately, because of numerous repairs and reconstructions the polychromy of stone window columns of the only one room on the second floor preserved. Geometric ornament of these columns has light blue painting on the umber background with wine-colored ocher outline made as an illusion of shadow to reveal better the relief (Fig. 15). That can be considered as an early appearance of *grisaille* technique, which was so spread in Baroque. There are seven painting layers in the similar colors.

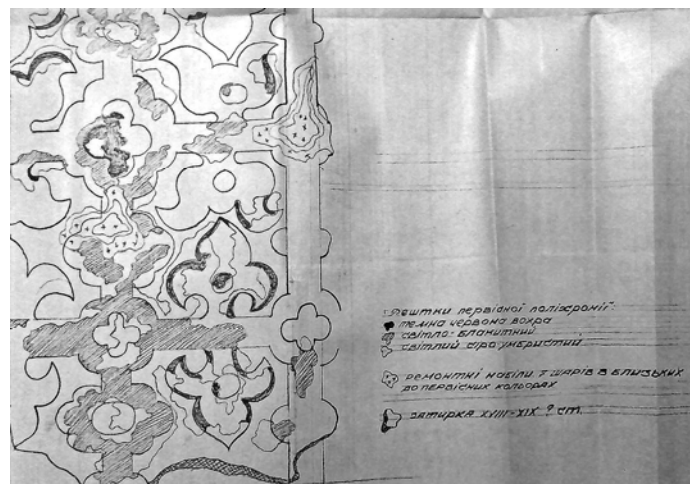


Fig. 15. The research of the polychromy of the sandstone interior window columns (the second floor, Bandinelli Palace). Sounding shows early *grisaille* painting. Project drawing. Source: [7]

Namely, window columns played an important role in the polychromy design of the renaissance city house interior. Therefore, the window columns in 10, Ruska Str. were painted in blue with flowers gilded. Similar interior columns in 2, Drukarska Str. were completely painted in red.

In the interiors of sacral architecture, architects used stucco, which is easy to use in decorative aims in comparison with sandstone (e.g. the upper part of the altar and dome coffers of Boims Chapel (Fig. 16), Chapel of the Three Hierarchs, the altar of Church of St. Mary Magdalene). Stucco reliefs were painted namely the field research of the poly-

chromy of Church of St. Mary Magdalene showed the presents of ochre, green, gray and pink colors, the relief background was gilded (Fig. 17). The using of gilding for the background helps to accent the relief and was typical for many architectural details – grapes bunches on the ceiling (Chapel of Three Hierarchs), vegetative ornaments of portals (Church of Saint Benedict), the capitals in Assumption Church. As V. Vuitsyk remarked, the Renaissance vault of the main nave of Bernardine Church also was decorated in stucco technique⁷. There were paintings in and around stucco medallions as ancient descriptions and chronicles says in 1614 [10, p. 82-94]. T. Yuzefovych confirms this fact in his chronicle of the city of Lviv. Also in 1643, Lviv citizen Voitsekh Ostrohorskyi bequeathed his property for decoration and painting of Latin Cathedral like Bernardine Church. The interior of Boims Chapel also was polychrome as the façade but the restoration works in 1920-s made significant changes remained until today (Fig. 16)⁸. Sculptures from white and gray alabaster (also called as 'Russian marble') and painted cabinets remained since Renaissance. During the restoration of City Arsenal in 1970-s there was revealed the polychromy of the pillars of the first floor which can be dated to the 1730-s. These pillars painted *a la fresco* imitate diamond rustication with white, black, gray and ivory colors in *grisaille* technique [5] (Fig. 17). Afterwards with the fashion change, the pillars and stone cornices were repainted in red with underlining moldings with black painted shadows.

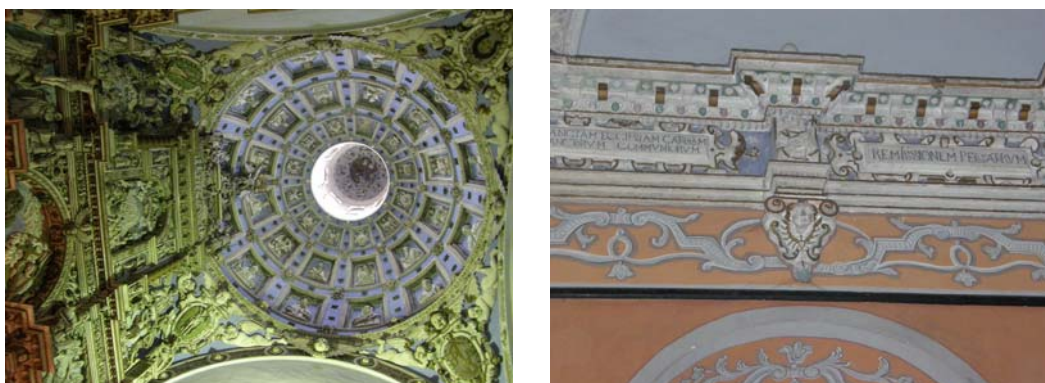


Fig. 16. The paintings of stucco reliefs in the interior of Boims Chapel (the restoration of 1920-s). Source: photo by author

Besides technique of intarsia, played a significant role in the design of furniture and interior doors. On the base of preserved elements (e.g. in Lviv historical museum) there was made the reconstruction of the furniture and doors of the houses in 2, 37, Market Square and in 2, Drukarska Str. (Fig. 18). The exterior doors and window shutters of renaissance city houses were metal, painted in black and constructive elements as nails were gilded. This continued until the 19th century. According to archaeological finds, muff glass of green and red colors had inserted in the windows of city houses. Because of the large thickness, the glass was opaque and colored the apartment in the certain color.

Therefore, the phenomenon of the polychromy of Lviv buildings of the 14th – the first half of the 17th century requires further field and archive research⁹, which gave the possibility to recreate the complete picture of its evolution.

⁷ Only stucco reliefs of the arcade in the main nave preserved until today.

⁸ The students of Lviv Arts and Industry School renewed these "primitive paintings" of the Boims Chapel interior [10].

⁹ Unfortunately, it is impossible to carry out the further research because of the significant cost and the lack of funding of such projects.

Fig. 17. The paintings of stucco altar of St. Mary Magdalene Church and the restoration of *a la fresco* paintings of pillars of the first floor of City Arcenal. Source: photo by Kost Prysiazhnyi (1980-s), photo by author



Fig. 18. The painting of the wooden cabinet in Boims Chapel and the imitation of intarsia in the interior of the house in 37, Market Square. Source: photo by author.



4. CONCLUSIONS

1. The phenomenon of the polychromy of Lviv buildings of the 14th – the first half of the 17th century namely of Gothic and Renaissance was not considered by researches because of insufficient number of preserved objects. However, field, archives and bibliographical search make it possible to recreate the main laws of the polychromy evolution at that period.
2. The main role in the polychromy of gothic facades of the 14th – the first half of the 15th century play geometric ornaments of brick masonry with pink joints and color-glazed or strongly baked brick. For conservation and aesthetic purpose, they plastered the stone masonry with lime mortar with red pigment.
3. The façade of Renaissance city house was built in brick with sandstone details and it was plastered and painted later. On the base of research of the facades of Lviv city houses the author puts forward the hypothesis about the peculiarity of the polychromy of Lviv renaissance façade, namely the light ochre color (ivory) of façade and multicolored

painting of stone portals and window frames (red, green, black, gold). However, the façade of administrative and sacral buildings regularly were painted in red.

4. To design the interior Lviv Renaissance architects used both the building polychromy (alabaster, marble and sandstone inlay) and the architectural polychromy. Sandstone window columns and portals completely painted or with combination of blue, red, white and ochre colors with gilding are the emphasis of polychromy design of the interior of Renaissance city house. In churches interiors, stucco decoration was painted. The restorers fixed the existence of simple illusive grisaille paintings imitating diamond rustication or raise small ornament relief. Wooden beams were painted in combination of ochre, blue, white and black colors. Interior doors and furniture were made in intarsia technique and were painted in combination of blue and ivory colors.

5. The analysis of the archeological finds of the 14th – the first half of the 17th century proves that muff glass of green color had inserted in the windows of city houses and stained glass – in the windows of churches. The floor was paved with baked bricks in *opus spicatum*. The exterior doors and window shutters were metal, painted in black with gilded details.

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