

MAGDALENA GARNCZARSKA

 <https://orcid.org/0000-0002-2094-0126>

Jagiellonian University
Faculty of History
Institute of Art History
ul. Grodzka 53
31-001 Kraków, Poland
magdalena.garnczarska@uj.edu.pl

FROM DIVINE LIGHT TO EARTHLY MATTER AND FROM SERGEY S. AVERINTSEV TO THE MATERIAL TURN: THE DEVELOPMENT OF RESEARCH ON THE GOLD IN BYZANTINE ART

Abstract. Gold in Byzantine art has long been interpreted as a symbol of divine light and transcendence. This article re-examines Sergei S. Averintsev's seminal text *Золото в системе символов ранневизантийской культуры* (*Gold in the Symbolic System of Early Byzantine Culture*; 1973) in dialogue with recent scholarship on materiality in medieval art. While Averintsev's reading of gold as an "absolute metaphor" for divine light emerged from symbolic hermeneutics, this study argues that his insights can be productively reinterpreted through the lens of the "material turn", which foregrounds the agency of matter, multisensory perception, and the socio-economic conditions of artistic production. Rather than opposing symbolic and material approaches, the article proposes their integration as a coherent methodological framework. It demonstrates that Averintsev anticipated key concerns of contemporary materiality studies by conceptualising gold not only as a theological sign, but also as a substance that acts – reflecting light, shaping ritual experience, and mediating divine presence. Particular attention is given to his distinction between light ($\phi\omega\varsigma$) and radiance ($\alpha\gamma\lambda\eta$), which allows for a more precise understanding of gold's dynamic, performative, and affective roles in Byzantine visual culture. By merging symbolic and material perspectives, the article advances a nuanced interpretation of gold in Byzantine art as both a medium of theological meaning and a material embedded within networks of production, power, and ritual. Matter and meaning thus emerge not as opposing categories, but as mutually constitutive dimensions of Byzantine artistic practice.

Keywords: gold, Byzantine art, materiality, radiance, multisensory perception, agency

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Averintsev on gold

Sergey Sergeyevich Averintsev (Сергей Сергеевич Аверинцев, 1937–2004) was an eminent Russian humanist, who treated Byzantine studies not only as a learning about Byzantium, but as a broad field for reflection on culture, language and spirituality, integrating philology, theology and philosophy, while proposing a model of scholarship based on dialogue and ethics¹. In 1973, he published an article entitled *Gold in the Symbolic System of Early Byzantine Culture* that perfectly aligned with his academic framework². Although more than fifty years have passed since its publication, Averintsev's text remains intellectually stimulating. However, the field of art history has since undergone significant methodological shifts – most notably the emergence of the “material turn”.

In this article, I propose a reinterpretation of Averintsev's insights through the lens of materiality studies. While his reading of gold as an “absolute metaphor” for divine light was rooted in symbolic hermeneutics, I argue that many of his intuitions – particularly regarding the performative and sensory dimensions of gold – can be productively re-examined in light of contemporary approaches that emphasize the agency of materials, the multisensory experience of sacred art, and the socio-economic networks of production and use. Thus, Averintsev's work serves not only as a foundational symbolic framework but also as a fertile ground for rethinking the role of gold in Byzantine art as both a theological sign and a material substance with its own presence, function, and meaning.

In his seminal paper on gold, Sergey Averintsev argued that this precious metal held an absolutely unique position in early Byzantine culture, transcending its material value and status as a luxury commodity. He proposed that gold functioned as the focal point of a sophisticated semiotic system, primarily aimed at visualising and embodying divine reality. Firstly, he emphasised that the Byzantine view of gold represented a deliberate and profound aesthetic shift, diverging from the legacy of antiquity. This re-evaluation was a theological necessity for a society centred on the dogma of the Incarnation, which aimed to find its own

¹ See: M. Janocha, *Serge Averintsev: byzantinologie dans la perspective humaniste*, „Series Byzantina” 8, 2010, p. 283–291.

² See: С.С. Аверинцев, *Золото в системе символов ранневизантийской культуры*, [in:] *Византия, южные славяне и Древняя Русь. Западная Европа. Искусство и культура. Сборник статей в честь В.Н. Лазарева*, ed. В.Н. Гращенков, Москва 1973, p. 43–52. In this article, I refer to the reprint of this text: С.С. Аверинцев, *Золото в системе символов ранневизантийской культуры*, [in:] idem, *Поэтика ранневизантийской литературы*, Санкт-Петербург 2004, p. 404–425. In addition, translations into French (S.S. Averincev, *L'or dans le système des symboles de la culture protobyzantine*, „Studi Medievali” 20.1, 1979, p. 47–67) and Polish (S. Awierincew, *Złoto w systemie symboli kultury wczesnobizantyjskiej*, trans. D. Ulicka, „Miesięcznik Literacki” 20.3, 1985, p. 119–128; then reprinted in: S. Awierincew, *Na skrzyżowaniu tradycji. Szkice o literaturze i kulturze wczesnobizantyjskiej*, trans. D. Ulicka, Warszawa 1988, p. 175–201) have also been published.

ways of visualising the divine in matter. According to the scholar, this contrast becomes most evident when we compare Byzantine mosaics with Phidias' renowned chryselephantine statues, such as Athena Parthenos. In Greek art, gold and ivory highlighted the power and generosity of the Olympian gods, yet remained firmly anchored in their materiality, affirming the earthly order. As he explained, however, in Byzantium gold ceased to be merely a precious raw material and instead became a vessel for metaphysical ideas. Its value lay not in its earthly origin but in its capacity to symbolise the unearthly³.

He suggested that this new, anti-illusionist aesthetic, in which material was raised to the status of a symbol, was fundamentally connected to the theology of light central to Byzantine spirituality. For the researcher, understanding Byzantine aesthetics of gold depends on redefining the very idea of light, which shifted from a physical phenomenon to a theophany – a direct sign of divinity. In this way of thinking, gold was chosen as its perfect material partner, becoming not just a symbol of light but its sacramental presence in sacred space. As he explained, the most complete expression of this idea is found in the concept of the golden background in Byzantine mosaics and icons. Unlike in European painting, where the background creates the illusion of three-dimensional space (as in Rembrandt's light and shadow modelling, which brings figures out of darkness), the golden background in Byzantine art is neither empty nor merely a space. It symbolises divine, uncreated light that pervades everything and is the source of all existence. The figures of saints do not stand before gold but are immersed in it, visualising the dogma of God's omnipresent grace. The glass tesserae of the mosaic do not transmit light but reflect it, making the background an active source of radiant brightness⁴.

According to Averintsev, Pseudo-Dionysius the Areopagite's thought had a fundamental influence on this understanding of gold. In his writings, he introduced the key concept of mental or intelligible light (φῶς νοητόν⁵, φῶς ἄϋλον⁶) – spiritual, divine light perceived by the mind (νοῦς) and not only by the senses. For

³ See: C.C. Аверинцев, *Золото в системе символов...*, p. 405–411. See also: D. Janes, *God and Gold in Late Antiquity*, New York 1998. Janes investigates how early Christianity, despite the Gospel saying that *it is easier for a camel to go through the eye of a needle than for someone who is rich to enter the kingdom of God*, (Matthew 19:24) still embraced and used splendour and treasures, especially gold. The main goal is to analyse how gold and other valuable materials were employed to showcase the power of the Christian God and to rival pre-Christian traditions of opulence. Janes approaches the subject using, in particular, methodology from the field of social history. He emphasises that material wealth gained importance as a symbolic reflection of social status and political alliance.

⁴ See: C.C. Аверинцев, *Золото в системе символов...*, p. 408, 414.

⁵ See: Pseudo-Dionysius Areopagita, *Corpus Dionysiacum*, vol. I, *De divinis nominibus*, ed. B.R. Suchla, Berlin–New York 1990 [=Patristische Texte und Studien, 33], IV, 5.

⁶ See: Symeon Neos Theologos, *Ἕμνην*, ed. A. Kambylis, Berlin–New York 2012 [=Supplementa Byzantina], ἕμνη 38, 47: Περὶ θεολογίας. Καὶ ὅτι ὁ νοῦς τῆς ὕλης τῶν παθῶν καθαρθεὶς ἄϋλως τὸν ἄϋλον καὶ ἄορατον καθορᾷ.

Pseudo-Dionysius, gold became, using Averintsev's term, an "absolute metaphor" for this immaterial light: *Just as gold functions as an 'absolute metaphor' of light, so light itself functions as an 'absolute metaphor' of God*⁷. Its brilliance was not perceived as a property of the metal itself, but as a reflection of divine brightness, and gold itself as an "icon of divine energies". Averintsev emphasised that this theological precision was expressed in the key conceptual distinction between light (φῶς) and radiance (αἴγλη). Therefore, light signified the calm, eternal and unchanging brightness of God. Radiance, on the other hand, symbolised the dynamic, sudden, lightning-like and dazzling manifestation of the divine presence. It was a radiance that was terrifying in its transcendent power, yet at the same time full of joy. Gold, with its shimmering, vibrant reflections, perfectly captured this dynamic aspect of divine revelation. This profound metaphysics of light, as we read in the text of the Russian scholar, expressed through gold, was supposed to find its complement in the symbolism resulting from the physical properties of the metal itself⁸.

For him, the idea of "pure gold" (χρυσίον καθαρόν) was essential in this context. This term, which appears often in biblical texts, symbolised absolute perfection and flawless purity⁹. It referred both to the nature of God himself and to the spiritual ideal that humankind should aim for. It was an image of a soul cleansed of all sin, shining with the original splendour bestowed upon it by the Creator. The researcher also emphasised that the concept of purity was closely linked to the motif of trial by fire. The image of gold being purified in a crucible served as a powerful metaphor for spiritual tests, suffering, and martyrdom. Just as fire burns away all impurities from gold, leaving only pure metal, so experiences and persecution purify faith, confirming its genuineness. In Christian thought, "tested faith" became actually more valuable than *gold* [...] *tested by fire* (1 Peter 1:7)¹⁰.

He recognised a continuation of the theme of gold tested by fire in Byzantine alchemy¹¹, which was seen not only as a craft but as a "mystical art of philosophers". The work of an alchemist, as described in his article, was akin to spiritual self-work – both aimed to transform imperfect matter (metal, soul) into a state

⁷ С.С. Аверинцев, *Золото в системе символов...*, p. 411: Как золото – "абсолютная метафора" света, так свет – "абсолютная метафора" Бога.

⁸ See: *Ibidem*, p. 411–414.

⁹ See, e.g., Ezra 2:69; Revelation 21:18, 21:21.

¹⁰ See: 1 Peter 1:7: ἵνα τὸ δοκιμίον ὑμῶν τῆς πίστεως πολυτιμότερον χρυσοῦ τοῦ ἀπολλυμένου, διὰ πυρὸς δὲ δοκιμαζομένου εὗρεθῆ εἰς ἔπαινον καὶ δόξαν καὶ τιμὴν ἐν ἀποκαλύψει Ἰησοῦ Χριστοῦ. *Novum Testamentum Graece*, eds. B. Aland, K. Aland, J. Karavidopoulos, C.M. Martini, B.M. Metzger, Stuttgart 2012 [28th ed.].

¹¹ On gold in alchemy, see: G.B. Kauffman, *The Role of Gold in Alchemy. Part I*, „Gold Bulletin” 18, 1985, p. 31–44; idem, *The Role of Gold in Alchemy. Part II*, „Gold Bulletin” 18, 1985, p. 69–78; idem, *The Role of Gold in Alchemy. Part III*, „Gold Bulletin” 18, 1985, p. 109–119. See also: P. Ball, *Alchemy. An Illustrated History of Elixirs, Experiments, and the Birth of Modern Science*, New Haven–London 2025, p. 62–85.

of perfection, namely gold. *To begin with, alchemists described their discipline as a 'divine science' (θεία ἐπιστήμη), a title that properly belongs to theology alone. It was characterised as a 'divine and sacred art', a 'mystical art of the philosophers'*¹². This idea of unchanging, fire-tested perfection is believed to be connected to the concept of power, which in Byzantium was thought to reflect the eternal and perfect order of the heavens¹³.

Averintsev also stated that in the Byzantine context, alchemy was viewed as a deeply symbolic process, akin to the Christian journey to salvation. Its ultimate aim – the transmutation of base metals into gold – represented the eschatological redemption of all creation and the restoration of matter to its original, paradisaical perfection. The alchemical concept of “healing” or “baptising” metals, which through a process of transformation attained the state of gold, was to be seen as a powerful analogy for the “renewal” of fallen human nature through grace. Just as lead – dark, heavy and tainted – could be transformed into luminous gold, so sinful man could be transformed into the image and likeness of God.

According to him, a surprising but, within the framework of Byzantine thought, entirely logical analogy was the comparison of alchemical transmutation to Eucharistic transformation.

Every base substance is, as it were, fallen gold. Yet the alchemist, acting in the role of a Redeemer and Saviour, is empowered to bestow upon this fallen gold a new 'soul' through the power of tincture; and Greek adepts of alchemy referred to this tincture by the term “πνεῦμα βαπτικόν”, which may, in principle, be translated as 'baptismal spirit'. Thus, the alchemical act proves to be not only an analogue of the sacrament of the Eucharist, but also an analogue of the sacrament of baptism. The ailing blackness of lead is to be transmuted into the radiant glory of gold¹⁴.

This bold parallel, remaining within the bounds of ecclesiastical orthodoxy, demonstrates the coherence of the Byzantine symbolic system. Both processes were regarded as mysteries in which matter (base metals, bread and wine) was trans-

¹² С.С. Аверинцев, *Золото в системе символов...*, р. 418: *Начать с того, что алхимики называли свою дисциплину “божественной наукой” (θεία ἐπιστήμη), то есть именем, по праву принадлежащим одной теологии. Это было “божественное и священное искусство”, “мистическое искусство философов”.*

¹³ See: *Ibidem*, р. 418–420.

¹⁴ *Ibidem*, р. 419–420: *всякое неблагородное вещество есть как бы падшее золото. Однако алхимик, выступая в роли Искупителя и Спасителя, властен даровать этому падшему золоту новую „душу” силой тинктуры; а тинктуру греческие адепты алхимии обозначали термином πνεῦμα βαπτικόν, что в принципе можно перевести как „крещальный дух”. Таким образом, алхимический акт оказывается не только аналогом таинства евхаристии, но также аналогом таинства крещения. Недужная чернота свинца должна быть претворена в блистающую славу золота.*

formed into a higher, spiritual form (gold, the Body and Blood of Christ). These were two different types of miracles in which the spirit permeated matter and sanctified it.

Furthermore, the researcher noted that in Byzantine culture, the symbolism of gold was deeply connected to the idea of power – both the supreme power, belonging to Christ the King, and earthly power, exercised by the emperor, regarded as His viceroy. In this context, gold can be seen as a visual symbol of majesty, linking the divine and the earthly realms. He also observed that alchemical and astrological traditions, which had influenced Byzantine thought, clearly linked gold with the Sun. In this system, the Sun was regarded as the king of the planets, and gold as the king of metals. This cosmic hierarchy served as an apt metaphor for the theological order: the “kingdom of the Sun” became a symbol of the “kingdom of the Messiah”. *A shared element in the symbolism of gold and of the Sun is the notion of a sacred ruler who grants his subjects a ‘Golden Age’, also described as the ‘Kingdom of the Sun’. For the Sun itself is understood as a king, being ‘called the ruler of all that is visible’, as Proclus testifies*¹⁵. Gold, being a solar substance, was its natural and obvious symbol on earth, as he states in his article. This symbolism had deep roots in Old Testament tradition.

The figure of King Solomon, whose wealth and wisdom were legendary, served as the archetype of a ruler endowed with divine glory. Byzantium, which regarded itself as the New Jerusalem, adopted this symbolism, making gold an essential attribute of God-sanctioned power. Gold, as a symbol of “all solar truths”, thus represented both the royal dignity of Christ, who is the “Sun of Justice”, and the majesty of the Byzantine emperor, whose authority was legitimised by its alignment with divine truth and purity. The court in Constantinople was awash with gold to visibly demonstrate that the emperor’s power was a reflection of heavenly glory. The ultimate aim of this elaborate symbolism, however, was to communicate the idea of transformation, which lay at the core of both Christian eschatology and the alchemical mystery¹⁶.

All things considered, in his analysis of the symbolism of gold in early Byzantine culture, the researcher concluded that it was much more than merely a precious metal or decorative element. It functioned as a coherent and advanced theological and aesthetic system that allowed for the expression and manifestation of fundamental truths of the Christian faith in a way that was accessible to the senses. According to him, the multidimensional symbolism of gold integrated the material world with the transcendent sphere. As light, it made the invisible presence of God visible. As a symbol of purity and indestructibility, it reflected the eternal

¹⁵ *Ibidem*, p. 417: *Общей знаменатель символики золота и символики Солнца – идея сакрального царя, приносящего подданным „золотой век”, или, что то же, „царство Солнца”. Ибо Солнце есть царь: „оно зовется царем всего зримого”, как свидетельствует тот же Прокл.*

¹⁶ See: *Ibidem*, p. 417.

nature of divine truth. As an emblem of power, it connected the earthly order with its heavenly prototype. Finally, as the aim of alchemical transformation, it became a herald of the ultimate salvation and transformation of all created matter. Through gold, as we can read in the paper, the invisible became tangibly present in the experience of the faithful, and sacred art transcended the boundaries of ordinary representation, becoming a place of authentic theophany.

Gold backgrounds – apart from worldly space

It is worth noting that even before Averintsev, other Russian researchers had articulated similar ideas, including the esteemed scholar Viktor Nikitich Lazarev (Виктор Никитич Лазарев), who examined this issue in his synthesis of the history of Byzantine painting (*История византийской живописи*), first published in 1947.

And thus, iconographic types, sanctified by tradition and perceived as truthful representations of real historical figures and events, endured for many centuries, undergoing only minor changes in the course of their development. These types invariably bear the imprint of their ideal prototypes. It is therefore only natural that, with such an approach to art, it should acquire a timeless and spaceless character. The principle of unreality prevails. Byzantine icons and mosaics employ an abstract golden background that replaces real three-dimensional space. This golden background isolates every phenomenon depicted upon it, wrenching it from the actual cycle of life. The phenomenon is thereby elevated into an ideal world, detached from the earth and its physical laws. In this world, objects are deprived of weight, and figures of volume. Appearing as incorporeal shadows, they are covered with a delicate web of golden lines, as if symbolising rays emanating from the deity. Being themselves incorporeal, the figures inhabit light, airy structures whose ‘reverse perspective’ lends them a fragile, immaterial character¹⁷.

¹⁷ В.Н. Лазарев, *История византийской живописи*, vol. I, Москва 1986, p. 18: *И поэтому освященные традицией иконографические типы, воспринимавшиеся как правдивое изображение реальных исторических лиц и событий, держатся долгие столетия, испытывая в процессе развития лишь незначительные изменения. На этих типах всегда лежит печать их идеальных прообразов. Вполне естественно, что при таком подходе к искусству последнее должно было получить вневременной и внепространственный характер. В нем побеждает принцип ирреальности. Византийские иконы и мозаики имеют абстрактный золотой фон, заменяющий реальное трехмерное пространство. Этот золотой фон изолировал любое изображенное на нем явление, вырывая его из реального круговорота жизни. Явление оказывалось тем самым вознесенным в идеальный мир, оторванный от земли и ее физических законов. В этом мире предметы лишены были тяжести, а фигуры – объема. Вырисовываясь как бесплотные тени, они были покрыты тончайшей паутиной золотых линий, как бы символизировавших исходящие от божества лучи. Будучи сами бесплотными, фигуры обитали в легких, воздушных зданиях, „обратная перспектива” которых придавала им хрупкий, имматериальный характер.*

Therefore, Lazarev pointed out that established iconographic types in Byzantium were to be understood as faithful representations of historical figures and events, even though they were idealised. He also highlighted the timeless and ageless nature of art, recognising that Byzantine art deliberately avoided realism, endowing its representations with an eternal quality unrelated to any specific location. Therefore, according to him, the golden background was intended to symbolise detachment from reality, creating an abstract space where the depicted phenomena were removed from the realm of earthly life. Unlike Averintsev, this researcher focused directly on Byzantine painting, referring strictly to gold backgrounds and chrysoigraphy.

It should be emphasised that the concept of the symbolic meaning of gold, particularly as a background in painting¹⁸, emerged at the beginning of the 20th century, as earlier scholars had viewed it as just the opposite of nature. This element was believed to strip paintings of realism. Jacob Burckhardt proposed this, linking the appearance of true air and clouds in paintings and the introduction of beautiful landscapes with the rejection of golden backgrounds in 15th-century Italian altarpieces:

The altarpiece, now entirely emancipated from the gold ground, became the birthplace of true air and true clouds in painting; indeed, it was here alone that landscape attained such a beautiful and solemn mode of existence as it displays in the works of outstanding masters of the late fifteenth century, and subsequently also in images intended for domestic devotion¹⁹.

It seems that Julius Lange was the first to recognise the strong symbolic significance of gold. In his 1893 article, he observed that gold was often associated with supernatural and divine realms, symbolising divinity, eternity, and perfection. He also highlighted that it was believed to reflect the colour of the sun, linking it to alchemical ideas like “Son of the Sun” or “Father of Fire”. Lange also specified that

¹⁸ On the idea of gold ground as an “invention of art historiography”, see: S.C. Quené, *Goldgrund und Perspektive. Fra Angelico im Glanz des Quattrocento*, Berlin–München 2023, p. 27–47. In her monograph, the researcher aims to demonstrate that the idea of ‘Goldgrund’ as a uniform, easily definable artistic motif is mistaken. She shows that gold leaf applications were a complex, multi-layered material that actively contributed to creating the illusion of space (perspective) and also reflected theological ideas (for example, eternity and divine light) in Quattrocento painting.

¹⁹ J. Burckhardt, *Beiträge zur Kunstgeschichte von Italien. Das Altarbild. Das Porträt in der Malerei. Die Sammler*, Basel 1898, p. 36: *das Altarblatt, jetzt völlig vom Goldgrund losgesprochen, ist die Geburtsstätte der wahren Luft und der wahren Wolken in der Malerei gewesen, ja, auch die Landschaft ist nur hier zu einem so schönen und feierlichen Dasein gelangt, wie sie es bei vorzüglichen Meistern der Spätzeit des 15. Jahrhunderts, und dann allerdings auch in Hausandachtsbildern aufweist.*

gold backgrounds in icons and mosaics were used to separate holy figures from earthly space, placing them in a timeless, spiritual realm. The researcher observed that gold's lustrous, festive, and hypnotic qualities enhanced its visual impact. According to him, its chemical resilience was also thought to strengthen its symbolic role as a sign of the eternal and unchanging. Interestingly, Lange observed that the meanings connected with gold varied and depended on the specific culture involved, emphasising that over time, gold's significance shifted from spiritual and religious to material and bourgeois, as shown in Dutch art, where gold symbolised prosperity and domestic joy²⁰. It should be noted that some of these ideas were developed by Averintsev; however, there are no references to Julius Lange in the footnotes of the article.

Either way, the focus on the symbolic meanings of gold continues to dominate studies of Byzantine art. The trend itself is not reprehensible, but unfortunately, the issue of gold is often reduced to a symbol of divine light in a vague and context-free manner, which does not significantly advance research. Even Otto Demus, in his groundbreaking book *Byzantine Mosaic Decoration* (1948), stated that gold was the most deserving substance for conveying divine ideas. Therefore, he believed that golden backgrounds created an atmosphere of sanctity for the figures depicted, as they were meant to be the most fitting representations of the unearthly splendour of divine prototypes. Nevertheless, he generally aimed to demonstrate how gold and light functioned within a particular sacred space, emphasising that golden backgrounds were not a symbol of infinite, heavenly space but, rather, were used to create a solid and tangible surface for images²¹. In short, it is simply impossible to list all the brief references in academic literature where gold in Byzantine painting is described as a symbol of divine light or otherworldly reality. There are too many of them²².

²⁰ See: J. Lange, *Et blad af koloritens historie* (1893), [in:] *Udvalgte Skrifter af Julius Lange*, eds. G. Brandes, P. Købke, København 1901, p. 136–156.

²¹ See: O. Demus, *Byzantine Mosaic Decoration. Aspects of Monumental Art in Byzantium*, Boston 1955, p. 10. See also: I. Versteegen, *Otto Demus, Byzantine Art and the Spatial Icon*, „Journal of Art Historiography” 19, 2018, p. 2–8.

²² Just some examples, see: J. Bodonyi, *Entstehung und Bedeutung des Goldgrundes in der spätantiken Bildkomposition. Ein Beitrag zur Sinndeutung der spätantiken Kunstsprache*, Wien 1932 [Ph.D. dissertation]; J. Beckwith, *Byzantium. Gold and Light*, [in:] *Light from Aten to Laser*, eds. Th.B. Hess, J. Ashbery, New York 1969, p. 51–52; B. Brenk, *Die ersten Goldmosaiken der christlichen Kunst*, „Palette” 38, 1971, p. 16; E. Kitzinger, *Byzantine Art in the Making. Main Lines of Stylistic Development in Mediterranean Art 3rd–7th Century*, Cambridge, Mass. 1980, p. 61–62; Th.F. Mathews, *The Clash of Gods. A Reinterpretation of Early Christian Art*, Princeton–Oxford 2003, p. 109; G. Peers, *Sacred Shock. Framing Visual Experience in Byzantium*, University Park 2004, p. 107–108; B. Schellewald, *Gold, Licht und das Potenzial des Mosaiks*, „Zeitschrift für Kunstgeschichte” 79, 2016, p. 464.

Gold – earthly substance. The “material turn”

What is especially notable in research on golden backgrounds in Western painting is that the literature on this subject is much more developed. As a result, aside from researchers exploring the possible symbolic meanings of gold, some authors suggest that gold in art should also be regarded in terms of physical substance, not just as a symbol or an element that makes paintings appear unreal. The emphasis on considering gold in terms of a specific material, a metal, was proposed by Ernst Gombrich, among others²³. Ellen Beer particularly emphasised this direction, urging researchers to question what gold truly is, rather than what it can represent. She argued that it should also be regarded as an artistic material used in diverse ways and subjected to various treatments. The researcher observed that the physical properties of gold, such as its ability to reflect light and its malleability in craftsmanship, were employed in medieval art to emphasise its tangible, real nature²⁴.

Therefore, she shifted the entire inquiry from the realm of abstract symbolism to the tangible reality of the workshop. This approach enables a more nuanced understanding of the medieval artist's intent, technique, and conceptual connection to the medium. Beer noted a clear distinction in the utilisation of gold between Western and Eastern Christian traditions. For her, the West never entirely abandoned its connection to the tangible world and the inherent value and properties of the metal itself – materiality was not meant to be denied within this culture, but rather celebrated and enhanced through craftsmanship. In turn, we can read that Byzantine artists used to employ gold to de-embodiment their paintings²⁵.

The broader significance of Beer's work lies in her proposal to correct specific scientific habits that prioritise symbolic interpretations over physical evidence. Basing her analysis on the “objective reality” of the art object, she emphasises the primacy of technique and the artist's engagement with physical media. Her methodology poses a significant challenge to purely iconographic interpretations that overlook the material conditions of an object's creation, reminding us that before a symbol can be interpreted, the thing must first be created. It is there – for example, in a polished surface – that we find the most authentic key to the medieval conceptual world. I argue that it is worthwhile to consider this research perspective in studies of Byzantine art.

²³ See: E.H. Gombrich, [rev.:] J. Bodonyi, *Entstehung und Bedeutung des Goldgrundes in der spätantiken Bildkomposition* – „Kritische Berichte zur Kunstgeschichtlichen Literatur” 5, 1935, p. 65–75.

²⁴ See: E.J. Beer, *Marginalien zum Thema Goldgrund*, „Zeitschrift für Kunstgeschichte” 46, 1983, p. 271–286.

²⁵ See: *Ibidem*, p. 273–276.

Ellen J. Beer has published her article in 1983. Nevertheless, her remarks well correspond with the so-called “material turn” in art history²⁶. This term refers to the relationship between “matter” (what something is composed of) and “materiality” (the quality of being material or composed of matter). In this approach, a work of art is regarded as “structured embodiment of matter and form”, with matter and form being inseparable from its meaning. The “material turn” encouraged art historians to adopt Aristotelian concepts (focused on matter and form) rather than Platonic ones (treating images as representations of ideas and ideologies, i.e., as shadows). Critics such as Michael Yonan argue that the discipline of art history has notoriously suppressed its identity as material culture, even though it has been studying the material aspects of objects for over a century²⁷.

In medieval art research, the “material turn” examines the interactions between people and objects, emphasising materials, materialism – the process of creating objects – and materiality, which relates to the meaning and character of objects. Researchers are also studying how relationships between people and objects are established through work, rituals, and customs. The “material turn” has encouraged methods that highlight the agency of objects and materials²⁸. Researchers have also embraced a multisensory approach, seeking to integrate studies of visuality with materiality²⁹. In short, the “material turn” doesn’t negate the importance of artworks’ meaning but shifts the focus of where that meaning is found. While traditional symbolic studies emphasised content and ideas, new materialist perspectives investigate how matter and its production processes create meaning³⁰.

Therefore, the shift towards emphasising materiality criticises earlier symbolic analyses for viewing artworks mainly as “concepts” and “images” – meaning detached from their physical form. The contemporary approach seeks to integrate matter, form, and social/political contexts as interconnected sources of meaning,

²⁶ Either way, we can say that within medieval art studies, the “material turn” was mainly about labelling and categorising an approach that had long been used in this field, rather than a completely new understanding of works of art. See: L. James, *Matters of Materiality in Byzantium. The Archangel Gabriel in Hagia Sophia, Constantinople*, „Konsthistorisk tidskrift / Journal of Art History” 86.3, 2017, p. 145.

²⁷ See: M. Yonan, *Toward a Fusion of Art History and Material Culture Studies*, „West 86th” 18.2, 2011, p. 245–248.

²⁸ See: A.E. Lester, K.C. Little, *Introduction: Medieval Materiality*, „English Language Notes” 53.2, 2015, p. 1–8.

²⁹ See: R. Preisinger, *Introduction. A Return to Medieval Visuality after the Material Turn*, [in:] *Medieval Art at the Intersection of Visuality and Material Culture: Studies in the “Semantics of Vision”*, ed. R. Preisinger, Turnhout 2021 [=DISPUT, 32], p. 24–25.

³⁰ See: M. Yonan, *Toward a Fusion of Art History...*, p. 237–238; K. Kollandsrud, *The Role of Material Studies in Shaping the Study of Medieval Art*, [in:] *The Medieval Scandinavian Art Reader*, eds. M.C. Stang, L. Tillery, Oslo 2023, p. 261.

often refocusing on the object itself as “a thing” whose material qualities and agency are crucial in producing symbolism. The “material turn” has also created new research directions in Byzantine studies. For instance, Bissera V. Pentcheva’s studies highlight the multisensory nature of artworks. She examines “material flux”, referring to how glitter, shadow, and glare influence icon surfaces, aiming to “animate” medieval images with a sense of temporal vitality. This “vitality” is generated physically but exists as an immaterial quality³¹.

Recent approaches to Byzantine materiality have paid increasing attention to the agency of materials, their interaction with light, and the multisensory conditions of perception³². Yet what remains largely absent from this scholarship is a precise conceptual differentiation of light itself. In this respect, Averintsev’s distinction between *phōs* (φῶς) and *aiglē* (αἴγλη) proves crucial. By distinguishing calm, ontological light from dynamic, dazzling radiance, Averintsev offers a conceptual framework that allows gold in Byzantine art to be understood not merely as a general symbol of divinity, but as a material operating differently according to modes of visibility, reflection, and movement. While contemporary materiality studies frequently emphasise light as an experiential or performative phenomenon, they rarely articulate such a theological and semantic distinction. Averintsev’s analysis thus sharpens current debates by providing a vocabulary capable of distinguishing between gold as a stable manifestation of divine presence and gold as a medium of sudden, affective revelation.

Gold in Byzantine culture was capable of sustaining multiple semantic registers that were not exclusively Christian. Alicia Walker’s analysis of *charis* (χάρις) in early Byzantine gold jewellery demonstrates how the material medium could preserve pre-Christian associations of charm, allure, and embodied presence alongside Christian meanings³³. Read in this light, Averintsev’s reflections on gold acquire an added dimension. His distinction between *phōs* and *aiglē* allows gold to be understood not only as a sign of divine light, but also as a medium capable of generating affective intensity and visual attraction. While Walker foregrounds the social and gendered implications of *charis* in gold objects, Averintsev provides

³¹ See: B.V. Pentcheva, *Hagia Sophia and Multisensory Aesthetics*, „Gesta” 50.2, 2011, p. 93–111; eadem, *The Sensual Icon: Space, Ritual, and the Senses in Byzantium*, University Park 2010; eadem, *Moving Eyes: Surface and Shadow in the Byzantine Mixed-Media Relief Icon*, „RES: Anthropology and Aesthetics” 55/56, 2009, p. 222–234; eadem, *The Performative Icon*, „The Art Bulletin” 88.4, 2006, p. 631–655.

³² See esp. *Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9]. See also: E. Freeman, *Introduction*, [in:] *Byzantine Materiality...*, p. 1–18.

³³ See: A. Walker, *The Materiality of “Charis” in Early Byzantium*, [in:] *Byzantine Materiality...*, p. 19–59. In her paper, she utilises the method suggested by Ittai Weinryb. See: I. Weinryb, *The Bronze Object in the Middle Ages*, Cambridge 2016.

a theological vocabulary that helps explain why gold's brilliance could operate simultaneously as a vehicle of grace and as a source of sensory fascination.

The performative and transformative capacities of materials, emphasised in recent studies of Byzantine materiality, can also be productively re-read through Averintsev's conceptual framework. Analyses of gold and glass in early Byzantine floor mosaics have shown how the interaction between matte and reflective surfaces generated visual dynamism, enlivening images through shimmer, glare, and movement³⁴. Such effects resonate closely with Averintsev's distinction between *phōs* and *aiglē*, insofar as gold here functions not merely as a stable sign of divine presence, but as a medium of dynamic, sudden radiance that activates perception.

A similar logic of transformation underlies discussions of Eucharistic matter across different media. Studies of stamped Eucharistic bread have shown how the imposition of form upon shapeless substance renders matter intelligible and efficacious, enabling it to function as a bearer of divine presence³⁵. Comparable dynamics operate in the material culture of Eucharistic vessels, where chalices made of transparent or visually mimetic materials allow the consecrated wine to be perceived as the Blood of Christ. In both cases, material form does not obscure but mediates presence, making transformation visible and theologically legible³⁶. Read through Averintsev's writings, these practices can be understood within a broader framework of material participation in divine energies. Whether the transformation concerns bread, base metals, or crafted liturgical objects, Averintsev situates material change within a symbolic and theological system in which matter is not merely a vehicle of meaning but an active participant in revelation. This perspective allows Eucharistic practices to be read as variations on a shared logic of transformation, mediation, and sacramental presence.

Questions of agency and material efficacy in Byzantine artefacts have also been explored through the concepts of contact, imitation, and embodied presence. Studies of pilgrim tokens and icons have shown how matter acquires power through physical proximity to holy persons or sites, as well as through mimetic relationships that establish continuity between image, prototype, and beholder³⁷. Read in this context, Averintsev's reflections on matter and transformation offer a broader theological horizon for understanding such practices. His insistence on the active participation of material substances in processes of sanctification and

³⁴ See: S.V. Leatherbury, *The Animate Floor in Early Byzantium: Glass and Gold*, [in:] *Byzantine Materiality...*, p. 61–83. In this context, see also: F. Barry, *Walking on Water: Cosmic Floors in Antiquity and the Middle Ages*, „The Art Bulletin” 89.4, 2007, p. 627–656.

³⁵ See: K. Taronas, *Early Christian and Byzantine Bread Stamps: An Ecology of Matter and Form*, [in:] *Byzantine Materiality...*, p. 85–101.

³⁶ See: E. Freeman, *Materiality and Metonymy: Seeing the Eucharist through Stone and Glass in the Middle Byzantine Liturgy*, [in:] *Byzantine Materiality...*, p. 137–158.

³⁷ See: G. Vikan, *Whence Agency?*, [in:] *Byzantine Materiality...*, p. 103–119.

revelation helps to explain why seemingly humble materials – dust, mud, or crafted images – could function as effective mediators of divine presence. Rather than locating agency solely in subjective perception or experiential reconstruction, Averintsev situates it within a symbolic and theological system in which matter itself is capable of being activated, transformed, and endowed with efficacy.

The significance of materials in Byzantium was inseparable from their economic, historical, and labour-related dimensions. Analyses of rhetorical descriptions of churches and precious liturgical objects have shown that their value was not derived solely from beauty or symbolic meaning, but from the costly substances employed and the complex processes of extraction, transport, and craftsmanship embedded within them³⁸. This emphasis on material value resonates closely with Averintsev's reflections on gold as a substance that embodies both metaphysical and worldly dimensions. For Averintsev, gold never functions as a purely abstract sign: its theological meaning is inseparable from its rarity, durability, and the human labour required to transform it. In this respect, Averintsev offers a framework in which the spiritual efficacy of precious materials is grounded not only in symbolism, but also in their tangible material history and their place within networks of power, production, and exchange.

The role of materiality in mediating divine presence can also be approached through tactile interaction and embodied perception. Analyses of Byzantine ivory sculptures have demonstrated how sustained physical contact – such as repeated touching by the faithful – activated images beyond the level of visual representation. Wear produced by touch does not merely testify to devotion, but points to an understanding of the object as an active participant in religious practice rather than a passive image referring to a prototype³⁹. Within Averintsev's theological framework, such phenomena can be understood as instances in which matter becomes capable of transformation through contact and use. His reflections on the participation of material substances in revelation help to explain why tactile engagement with images was regarded as a legitimate mode of encountering the incarnate divine. Materiality here operates not only through sight, but through the body, allowing presence to be perceived and affirmed through physical, sensory interaction.

Byzantine reflections on materiality and perception were also shaped by Aristotelian conceptions of the relationship between matter (ύλη) and form (μορφή). Within this framework, form renders matter intelligible and apprehensible, while matter itself remains knowable only through analogical reasoning. Such assump-

³⁸ See: H. Prance, *Miniature Materials, Major Monuments: Concrete Connections and Concrete Histories*, [in:] *Byzantine Materiality...*, p. 121–136.

³⁹ See: A. Cutler, *Being Material, Material Being: Ivory and Ontology*, [in:] *Byzantine Materiality...*, p. 159–175.

tions provide an important philosophical background for understanding how images and objects acquire meaning through the imposition of form⁴⁰. Averintsev's thought intersects productively with this tradition, while moving beyond a purely epistemological account of form and matter. His theological understanding of material participation allows form not only to signify, but to activate matter as a site of presence and transformation. In this perspective, works of art do not merely become intelligible through form, but become capable of mediating reality – divine presence – through their material constitution.

Efforts to systematise the theoretical understanding of sacred matter in Byzantium further illuminate the tensions between form, substance, and presence. Medieval debates surrounding icons, the Eucharist, and relics sought to articulate clearer distinctions between material substance and likeness, while simultaneously integrating these domains within a shared conceptual framework. The notion of “*typos*” (τύπος) – understood as imprint, pattern, or reflection – played a crucial role in this process, enabling the manifestation of divinity to be perceived across different media as a typological fulfilment rather than as an exclusive property of any single material form⁴¹. From this perspective, Averintsev's writings offer an important point of orientation. His understanding of material participation resists rigid ontological hierarchies that would isolate relics, images, or Eucharistic matter into separate categories of sacred substance. Instead, Averintsev conceptualises materiality as a continuum activated through form, ritual, and theological meaning. Such a framework helps to explain how Byzantine thought could negotiate the relationship between form and matter without dissolving material specificity, while still maintaining the coherence of divine presence across diverse media.

The relationship between image, material presence, and invisibility further complicates Byzantine understandings of sacred matter. In certain cultic contexts, power was not generated through visual access to an image, but through the accumulation and orchestration of materials surrounding it. The veiled icon of the Virgin Kykkotissa presents a compelling case in which the image itself remains inaccessible to sight, while its efficacy is intensified through layers of precious matter – gold, textiles, and votive offerings – that function collectively as a material

⁴⁰ See: Ch. Barber, *The Place of Materiality in Byzantine Thought*, [in:] *Byzantine Materiality...*, p. 177–191.

⁴¹ See: R. Betancourt, *Icon, Eucharist, Relic: Negotiating the Division of Sacred Matter in Byzantium*, [in:] *Byzantine Materiality...*, p. 193–234. Averintsev, in his article, also drew a comparison between alchemical transmutation and Eucharistic transformation within Byzantine thought. He highlighted that both processes were seen as mysteries where matter – such as base metals, bread, and wine – was transformed into a higher spiritual form, like gold or the Body and Blood of Christ. In both cases, the spirit permeated and sanctified the matter. Similarly, in the *Byzantine Materiality*, the central ideas of the Eucharist and materiality are thoroughly examined, highlighting that in Byzantium, the Eucharist was regarded as a vital act that transforms matter into a higher, sacred form.

framework of presence⁴². Within Averintsev's theological horizon, such configurations underscore the active role of matter in mediating divine power without relying on direct visual representation. His understanding of material participation allows for the possibility that sacred presence may be articulated through concealment, contact, and amassed material splendour rather than through figural visibility. In this sense, the icon operates less as an isolated image than as the centre of a material constellation, in which substance, legend, and ritual activation converge to sustain and amplify divine efficacy.

Recent reflections on Byzantine materiality have increasingly called for approaches that extend beyond aesthetic and spiritual interpretation to encompass extractive processes, labour, and the systemic conditions underlying the production of luxury materials. Such perspectives stress the need to situate precious substances within networks of extraction, circulation, and power, thereby drawing attention to the often-invisible human costs embedded in their transformation into sacred objects⁴³.

In this regard, comparative frameworks developed outside Byzantine studies are particularly instructive. The volume *Global Gold: Aesthetics, Material Desires, Economies in the Late Medieval and Early Modern World*, edited by Thomas B.F. Cummins, demonstrates how gold can be analysed as a substance shaped simultaneously by aesthetic desire, economic structures, and global systems of exploitation and exchange⁴⁴. Although the Byzantine case poses specific challenges – owing to the scarcity of written sources and the limited archaeological identification of mining and workshop sites – such perspectives suggest promising directions for future research on gold within the empire and its neighbouring regions.

More broadly, contemporary research on Byzantine art has shifted emphasis from exclusively symbolic interpretation toward the physical constitution of artworks, their modes of production and use, and their sensory effects. Within this framework, gold no longer functions solely as a sign of transcendence, but emerges as a material endowed with agency – an agency that, within Byzantine thought, required activation through form, ritual, and theological meaning rather than being understood as entirely intrinsic. Meaning is thus generated not only at the level of ideas, but through the interplay of matter, form, and social context.

⁴² See: A. Weyl Carr, *Icons, Relics, and the Substance of Things Half Seen*, [in:] *Byzantine Materiality...*, p. 235–255.

⁴³ See: R. Betancourt, *Afterword. Futures for Byzantine Materiality*, [in:] *Byzantine Materiality...*, p. 257–261.

⁴⁴ See: *Global Gold: Aesthetics, Material Desires, Economies in the Late Medieval and Early Modern World*, ed. Th.B.F. Cummins, Cambridge, MA 2024 [=I Tatti Research Series, 7].

Averintsev's writings offer a critical framework for articulating this shift. His understanding of gold as a substance that both signifies and participates demonstrates that materiality does not stand in opposition to symbolism, but actively collaborates in producing meaning and enabling the experience of the sacred. From this perspective, the so-called "material turn" appears less as a rupture with earlier symbolic approaches than as their reformulation – one that renders visible the material conditions through which theological meaning is realised, activated, and perceived.

In the context discussed, I argue that Averintsev's ideas are newly relevant. His well-known discussion of gold as an "absolute metaphor" for both light and God, although formulated within a symbolic hermeneutic framework, contains elements that can be productively reconsidered in light of the "material turn". Averintsev described gold not merely as a sign, but as an icon of divine energies, a medium of theophany, and a substance that both symbolises and participates in revelation.

His distinction between light (φῶς) and radiance (αἴγλη) – between God's quiet, ontological presence and His dynamic, manifesting appearance – anticipates later investigations into the sensual, performative, and affective dimensions of gold. In this sense, although Averintsev wrote within the parameters of symbolic interpretation, his work contains intuitions that contemporary materiality studies have developed further by focusing on agency, corporeality, and networks of relations. As he repeatedly emphasised, gold in Byzantium not only "meant," but also "acted": in ritual practice, in sensory perception, and within a theology of light.

From this perspective, the "material turn" does not challenge symbolism, but rather supports and refines it by attending to artistic techniques, physical properties, and social contexts. Ellen Beer, cited above, already proposed shifting the analytical focus from what gold signifies to what gold materially is – namely, a metal, a surface, and a medium of light. Gold thus emerges as a theological substance whose efficacy depends on how it is worked, displayed, and activated through light, touch, and gesture. To use a term coined by Herbert Kessler, gold in Byzantium exhibited "overt materiality": According to this approach, the material was not a passive carrier of ideas or images, but held meaning, power, and symbolic significance in itself⁴⁵.

⁴⁵ See: H.L. Kessler, *Seeing Medieval Art*, Toronto 2011, p. 19.

Bibliography

Primary Sources

- Averincev S.S., *Lor dans le système des symboles de la culture protobyzantine*, „Studi Medievali” 20.1, 1979, p. 47–67.
- Averincev S.S., *Zoloto v sisteme simbolov rannevizantijskoj kul'tury*, [in:] *Vizantija, južnye slavjane i Drevnjaja Rus'. Zapadnaja Evropa. Iskusstvo i kul'tura. Sbornik statej v čest' V.N. Lazareva*, ed. V.N. Graščenkov, Moskva 1973, p. 43–52 [= *Poëtika rannevizantijskoj literatury*, Sankt-Peterburg 2004, p. 404–425].
- Awierincew S., *Złoto w systemie symboli kultury wczesnobizantyjskiej*, trans. D. Ulicka, „Miesięcznik Literacki” 20.3, 1985, p. 119–128 [=S. Awierincew, *Na skrzyżowaniu tradycji. Szkice o literaturze i kulturze wczesnobizantyjskiej*, trans. D. Ulicka, Warszawa 1988, p. 175–201].
- Novum Testamentum Graece*, eds. B. Aland, K. Aland, J. Karavidopoulos, C.M. Martini, B.M. Metzger, Stuttgart 2012 [28th ed.].
- Pseudo-Dionysius Areopagita, *Corpus Dionysiacum*, vol. I, *De divinis nominibus*, ed. B.R. Suchla, Berlin–New York 1990 [=Patristische Texte und Studien, 33].
- Symeon Neos Theologos, *Hymnen*, ed. A. Kambylis, Berlin–New York 2012 [=Supplementa Byzantina].

Secondary Literature

- Ball P., *Alchemy. An Illustrated History of Elixirs, Experiments, and the Birth of Modern Science*, New Haven–London 2025.
- Barber Ch., *The Place of Materiality in Byzantine Thought*, [in:] *Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9], p. 177–191.
- Barry F., *Walking on Water: Cosmic Floors in Antiquity and the Middle Ages*, „The Art Bulletin” 89.4, 2007, p. 627–656.
- Beckwith J., *Byzantium. Gold and Light*, [in:] *Light from Aten to Laser*, eds. Th.B. Hess, J. Ashbery, New York 1969, p. 44–57.
- Beer E.J., *Marginalien zum Thema Goldgrund*, „Zeitschrift für Kunstgeschichte” 46, 1983, p. 271–286.
- Betancourt R., *Afterword. Futures for Byzantine Materiality*, [in:] *Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9], p. 257–261.
- Betancourt R., *Icon, Eucharist, Relic: Negotiating the Division of Sacred Matter in Byzantium*, [in:] *Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9], p. 193–234.
- Bodonyi J., *Entstehung und Bedeutung des Goldgrundes in der spätantiken Bildkomposition. Ein Beitrag zur Sinndeutung der spätantiken Kunstsprache*, Wien 1932 [Ph.D. dissertation].
- Brenk B., *Die ersten Goldmosaiken der christlichen Kunst*, „Palette” 38, 1971, p. 16–25.
- Burckhardt J., *Beiträge zur Kunstgeschichte von Italien. Das Altarbild. Das Porträt in der Malerei. Die Sammler*, Basel 1898.
- Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9].
- Cutler A., *Being Material, Material Being: Ivory and Ontology*, [in:] *Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9], p. 159–175.
- Demus O., *Byzantine Mosaic Decoration. Aspects of Monumental Art in Byzantium*, Boston 1955.
- Freeman E., *Introduction*, [in:] *Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9], p. 1–18.

- Freeman E., *Materiality and Metonymy: Seeing the Eucharist through Stone and Glass in the Middle Byzantine Liturgy*, [in:] *Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9], p. 137–158.
- Global Gold: Aesthetics, Material Desires, Economies in the Late Medieval and Early Modern World*, ed. Th.B.F. Cummins, Cambridge, MA 2024 [=I Tatti Research Series, 7].
- Gombrich E.H., [rev.:] *J. Bodonyi, Entstehung und Bedeutung des Goldgrundes in der spätantiken Bildkomposition* – „Kritische Berichte zur Kunstgeschichtlichen Literatur” 5, 1935, p. 65–75.
- James L., *Matters of Materiality in Byzantium. The Archangel Gabriel in Hagia Sophia, Constantinople*, „Konsthistorisk tidskrift / Journal of Art History” 86.3, 2017, p. 145–157.
- Janes D., *God and Gold in Late Antiquity*, New York 1998.
- Janocha M., *Serge Averintsev: byzantinologie dans la perspective humaniste*, „Series Byzantina” 8, 2010, p. 283–291.
- Kauffman G.B., *The Role of Gold in Alchemy. Part I*, „Gold Bulletin” 18, 1985, p. 31–44.
- Kauffman G.B., *The Role of Gold in Alchemy. Part II*, „Gold Bulletin” 18, 1985, p. 69–78.
- Kauffman G.B., *The Role of Gold in Alchemy. Part III*, „Gold Bulletin” 18, 1985, p. 109–119.
- Kessler H.L., *Seeing Medieval Art*, Toronto 2011.
- Kitzinger E., *Byzantine Art in the Making. Main Lines of Stylistic Development in Mediterranean Art 3rd–7th Century*, Cambridge, Mass. 1980.
- Kollandsrud K., *The Role of Material Studies in Shaping the Study of Medieval Art*, [in:] *The Medieval Scandinavian Art Reader*, eds. M.C. Stang, L. Tillery, Oslo 2023, p. 249–271.
- Lange J., *Et blad af koloritens historie (1893)*, [in:] *Udvalgte Skrifter af Julius Lange*, eds. G. Brandes, P. Købke, København 1901, p. 136–156.
- Lazarev V.N., *Istorija vizantijskoj živopisi*, vol. I, Moskva 1986.
- Leatherbury S.V., *The Animate Floor in Early Byzantium: Glass and Gold*, [in:] *Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9], p. 61–83.
- Lester A.E., Little K.C., *Introduction: Medieval Materiality*, „English Language Notes” 53.2, 2015, p. 1–8.
- Mathews Th.F., *The Clash of Gods. A Reinterpretation of Early Christian Art*, Princeton–Oxford 2003.
- Peers G., *Sacred Shock. Framing Visual Experience in Byzantium*, University Park 2004.
- Pentcheva B.V., *Hagia Sophia and Multisensory Aesthetics*, „Gesta” 50.2, 2011, p. 93–111.
- Pentcheva B.V., *Moving Eyes: Surface and Shadow in the Byzantine Mixed-Media Relief Icon*, „RES: Anthropology and Aesthetics” 55/56, 2009, p. 222–234.
- Pentcheva B.V., *The Performative Icon*, „The Art Bulletin” 88.4, 2006, p. 631–655.
- Pentcheva B.V., *The Sensual Icon: Space, Ritual, and the Senses in Byzantium*, University Park 2010.
- Prance H., *Miniature Materials, Major Monuments: Concrete Connections and Concrete Histories*, [in:] *Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9], p. 121–136.
- Preisinger R., *Introduction. A Return to Medieval Visuality after the Material Turn*, [in:] *Medieval Art at the Intersection of Visuality and Material Culture: Studies in the “Semantics of Vision”*, ed. R. Preisinger, Turnhout 2021 [=DISPUT, 32], p. 23–35.
- Quené S.C., *Goldgrund und Perspektive. Fra Angelico im Glanz des Quattrocento*, Berlin–München 2023.
- Schellewald B., *Gold, Licht und das Potenzial des Mosaiks*, „Zeitschrift für Kunstgeschichte” 79, 2016, p. 461–480.
- Taronas K., *Early Christian and Byzantine Bread Stamps: An Ecology of Matter and Form*, [in:] *Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9], p. 85–101.
- Verstegen I., *Otto Demus, Byzantine Art and the Spatial Icon*, „Journal of Art Historiography” 19, 2018, p. 1–24.

- Vikan G., *Whence Agency?*, [in:] *Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9], p. 103–119.
- Walker A., *The Materiality of “Charis” in Early Byzantium*, [in:] *Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9], p. 19–59.
- Weinryb I., *The Bronze Object in the Middle Ages*, Cambridge 2016.
- Weyl Carr A., *Icons, Relics, and the Substance of Things Half Seen*, [in:] *Byzantine Materiality*, eds. E. Freeman, R. Betancourt, Berlin–Boston 2024 [=New Approaches to Medieval Literary and Material Culture, 9], p. 235–255.
- Yonan M., *Toward a Fusion of Art History and Material Culture Studies*, „West 86th” 18.2, 2011, p. 232–248.