

## THE WRITTEN WORDS IN ISLAMIC SPACE: CALLIGRAPHY ACROSS ARCHITECTURE AND OBJECTS

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### Abstract:

*Islamic calligraphy has an important role in the artistic, spiritual, and cultural heritage of the Islamic world. It is not just beautiful but also serves as a way to express religious beliefs, provide moral lessons, and represent cultural identity. This study looks at how calligraphy is placed in various contexts throughout Islamic civilization, including large structures like mosques, madrasas, shrines, palaces, and civic buildings. It also examines smaller items such as coins, manuscripts, legal documents, weapons, household objects, textiles, jewellery, and luxury arts. The relationship between script, decoration, and space is highlighted, with examples such as the Patio de la Acequia in the Alhambra in Granada where Naskh and Kufic inscriptions combine with geometric and plant designs, changing architectural spaces into areas filled with text and spirituality. This analysis shows that Islamic calligraphy acts not just as decoration but also as a way to express religious feelings, political power, and cultural values, showing its lasting impact in both past and present times.*

### Keywords:

Arabic calligraphy, Islamic interior design, Islamic architecture, Architectural decoration, Arabic calligraphy decoration, Mosques, Palaces and Public buildings, Muslim Culture.

### Introduction:

Arabic calligraphy is an artistic practice based on the Arabic alphabet, encompassing both handwriting and calligraphy. It is referred to as خط (Arabic), which is derived from terms meaning 'line,' 'plan,' or 'construction.' This art form is connected to various fields, including religion, sculpture, architecture, education, and craftsmanship within Arab civilization, which significantly contributed to its development. Calligraphy is utilized in both religious and secular buildings and appears on a variety of objects such as ceramics, glass, carpets, jewelry, woodwork, and metalwork<sup>1</sup>. The style of calligraphy is determined by the content of the text, the shape of the surfaces, and the intended function. Consequently, each script has multiple forms and materials based on its context.<sup>2</sup>

The origins of Arabic calligraphy can be traced back to the Phoenician state, which was divided into Aramaic, Greek, Hamiri, and Hebrew.<sup>3</sup> Aramaic calligraphy branched out into Tigris, Indian, Persian, Phahlawi, Hebrew, Murabah, and Syriac styles. Later, Syriac

<sup>1</sup> George, A. (2017). The Quran, Calligraphy, and the Early Civilization of Islam. A Companion to Islamic Art and Architecture, 109-129.

<sup>2</sup> Fragment, T. (2018). Arabic Script and the Art of Calligraphy.

[https://www.metmuseum.org/learn/educators/curriculum-resources/art-of-the-islamicworld/~/\\_/media/Files/Learn/For%20Educators/Publications%20for%20Educators/Islamic%20Teacher%20Resource/Unit2.pdf](https://www.metmuseum.org/learn/educators/curriculum-resources/art-of-the-islamicworld/~/_/media/Files/Learn/For%20Educators/Publications%20for%20Educators/Islamic%20Teacher%20Resource/Unit2.pdf)

<sup>3</sup> Gacek, A. (2009). Arabic manuscripts: a Vad mecum for readers (Vol. 98). Brill.

calligraphy produced two types: Hamari and Nabataean<sup>4</sup>. Nabataean calligraphy eventually led to the development of Arabic calligraphy. Thus, Arabic calligraphy is derived from the Nabataeans, who were Arabs residing in the northern Arabian Peninsula, particularly in Petra.<sup>5</sup> Therefore, Arabic calligraphy originated from Nabataean calligraphy.<sup>6</sup>

According to Raina and Semin, Arabic calligraphy is described as the silent music of the language that aids in understanding Islam<sup>7</sup>. Lowry conducted a study on Islamic Calligraphy, providing detailed descriptions and illustrations of twenty exhibits at the Freer Gallery in Washington. Additionally, there is research on Islamic geometric patterns<sup>8</sup> and a survey by Leake that discusses the importance of contemporary art in bridging the gap between theory and practice in art education. Calligraphy flourished during the Ottoman period, where the composition and integration of ornaments as decorative methods were considered one of the artistic styles used in woodwork on Ottoman monuments.<sup>9</sup>

The history of Quranic calligraphy is a story of continuous evolution. Each era brought innovation, beauty, and refinement to it. The history of Quranic calligraphy evolved through different periods, and rise to its own distinctive style and technique. Even today, Quranic calligraphy remains an eternal part of Islamic culture, and calligraphers around the world are still working to keep this art alive.

During the Abbasid Caliphate, Ottoman Caliphate, and Mughal period, Quranic calligraphy was at its peak. With the help of the illumination and calligraphy, Quranic manuscripts were presented in a very beautiful manner. However, during the colonial period, the Islamic cultural heritage suffered decline, and the radiant tradition of Quranic calligraphy could not be sustained. After the Mughal era, official patronage of Quranic calligraphy almost came to an end. As a result, the tradition of producing beautifully calligraphed copies of the Holy Qur'an in the Indian subcontinent weakened.

Calligraphy in Islamic civilization is not merely a means of writing but holds deep spiritual and aesthetic significance. Qur'anic verses, hadiths, and prayers are written in extremely beautiful styles through calligraphy to enhance their spiritual impact. Islamic architecture reflects the deep connections between religion, art, and architecture in the Islamic world and serves as a mirror of its cultural and artistic traditions.

### **The Diverse Placements of Islamic Calligraphy:**

In ancient times, calligraphic patterns could be seen on the walls of mosques, madrasas, and royal palaces. Later, the innovation and beauty of calligraphy were not limited to buildings and books but also began to adorn swords and shields. Even coins of that era were also featured embossed calligraphic words. Such utensils, coins, weapons of war, and other everyday items can still be seen in museums around the world today.

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<sup>4</sup> Waterman, M. (2009). Introduction to Arabic Calligraphy Yahya, A., & Embi, M. R. B. (2013). Evolution of Islamic geometric patterns. *Frontiers of Architectural Research*, 2(2), 243-251. <https://doi.org/http://dx.doi.org/10.1016/j.foar.2013.03.002>

<sup>5</sup> George, A. (2009). Calligraphy, Color and Light in the Blue Qur'an. *Journal of Qur'anic Studies*, 11(1), 75-125.

<sup>6</sup> Gacek, A. (2009). *Arabic manuscripts: a Vad mecum for readers* (Vol. 98). Brill.

<sup>7</sup> Raina, S. (2005). Teaching Islamic religious art helps understand Islamic culture [M.A., The University of Arizona]. ProQuest Dissertations & Theses Global. Ann Arbor. <http://210.48.222.80/proxy.pac/docview/305025677?accountid=44024>

<sup>8</sup> Yahya, A., & Embi, M. R. B. (2013). Evolution of Islamic geometric patterns. *Frontiers of Architectural Research*, 2(2), 243-251. <https://doi.org/http://dx.doi.org/10.1016/j.foar.2013.03.002>

<sup>9</sup> M, A. W. M. f. e. e., & Panaxoside, M. (2014). THE FLORAL AND GEOMETRICAL ELEMENTS ON THE OTTOMAN ARCHITECTURE IN RHODES ISLAND [Article]. *Egyptian Journal of Archaeological & Restoration Studies*, 4(2), 87-104.

A few years ago, a Travancore Kerala temple was in the news, where treasures worth billions of rupees were recovered from six basements. These treasures included gold plaques engraved with Arabic and Persian inscriptions. These are valuable not only because they are made of gold but also because they feature magnificent examples of calligraphy and highlight the fundamental elements of Islamic civilization.

Calligraphers today still embrace the old techniques and traditions to stay connected to their cultural heritage, but in a modern style. This art has been prominent in architecture, sculptures, paintings, wall designs, frames, vases, decorative plates, wall art, etc.

### **Architectural Placements of Calligraphy:**

Muslim architecture represents one of the most refined expressions of Islamic art. Between the 9th and 15th centuries, cities emerged as monumental centers of architectural innovation. In addition to these iconic monuments, palaces, fortresses, urban walls, and popular architecture throughout the world testify to the enduring contributions of Muslim architects. The Islamic artistic heritage is also preserved through decorative arts such as ivories, ceramics, textiles, glassworks, and jewelry, which help reconstruct the region's Islamic past. States evolved as a cultural landscape shaped by prolonged conflict and coexistence between Islam and Christianity, resulting in a shared yet tension-filled cultural imagination that remains evident in architecture and urban form.



Pic: Artistic calligraphy in mosque interior

From the early centuries of Islam, Qur'anic inscriptions have been included in architectural designs using different scripts that are influenced by regional and historical contexts. In the Holy cities of Makkah and Madinah, the Masjid al-Haram and Al-Masjid an-Nabawi display notable examples of Thuluth and Naskh calligraphy. This reflects ongoing architectural support from the 7th century onward<sup>10</sup>. The Umayyad Mosque of Damascus and the Great Mosque of Córdoba represent early Islamic monumental architecture. They incorporate Kufic and early cursive scripts in a way that aligns with architectural rhythm and spatial organization.

The Patio de la Acequia, located near the Alhambra in Granada, is part of a palace and fortress complex originally established in 889 AD. on Roman foundations and later transformed during the Nasrid period. Major reconstructions were undertaken under Muhammad ben Al-Ahmar and Yusuf I, who converted the site into a royal palace in the 14th century<sup>11</sup>. Following the Christian Reconquista in 1492, Renaissance and Mannerist

<sup>10</sup> A. Capozzoli, F. Corno, V. Corrado, and A. Gorrino, "The Overall Architecture of a Decision Support System for Public Buildings," *Energy Procedia*, vol. 78, pp. 2196–2201, Nov. 2015, Doi: 10.1016/J.EGYPRO.2015.11.318.

<sup>11</sup> Cariñanos, P., Casares-Porcel, M., de la Guardia, A. V. D., De la Cruz-Márquez, R., & de la Guardia, C. D. (2016). Charting trends in the evolution of the La Alhambra forest (Granada, Spain) through analysis of pollen-emission dynamics over time. *Climatic change*, 135(3-4), 453- 466

interventions were introduced, including the unfinished Palace of Charles V, commissioned in 1526 but abandoned due to political unrest<sup>12</sup>. After periods of neglect and damage, the Alhambra was rediscovered in the 19th century and is now recognized as a UNESCO World Heritage Site and one of Spain's most significant cultural landmarks.

A defining feature of the Patio de la Acequia and the Alhambra as a whole is the extensive use of Arabic calligraphy integrated with geometric and vegetal ornamentation. Quranic verses, poetic texts, and repeated phrases such as "There is no victor but Allah" are inscribed across the walls in Naskh and Kufic scripts, often without diacritical marks and arranged symmetrically, making interpretation challenging. These inscriptions transform architecture into a textual and spiritual space, where words, geometry, and reflection interact with water, light, and shadow.

### Religious Spaces and Ritual Contexts:

During the Ottoman era, calligraphy became more significant in mosque interiors<sup>13</sup>. This is especially true in the Sulaymaniyah Mosque and the Sultan Ahmed Mosque in Istanbul, where Thuluth and Diwani scripts express imperial authority and spiritual elegance. The Safavid period in Iran further advanced calligraphic expression through monumental tile inscriptions. This is evident in the Shah Mosque of Isfahan and the Goharshad Mosque in Mashhad, which utilize Persian calligraphic traditions, including Nasta'liq, alongside Thuluth.



Pic: Prophet Mosque, Madina, Saudia Arabia

In South Asia, Mughal mosques such as the Badshahi Mosque, Wazir Khan Mosque<sup>14</sup>, and Jama Masjid of Delhi show a blend of Persian literary culture and Qur'anic epigraphy<sup>15</sup>. The Quwwat-ul-Islam Mosque preserves early Kufic inscriptions, marking the foundational phase of Islamic architecture in that region<sup>16</sup>. From the medieval period to modern times, mosques like Al-Aqsa in Jerusalem, the Hassan II Mosque in Casablanca, and

<sup>12</sup>Eggleton, L. (2012). History in the making: the ornament of the Alhambra and the past-facing present. *Journal of Art Historiography* (6), 1.

<sup>13</sup> A. A. Ersoy, "Ottomans and the Kodak Galaxy: Archiving Everyday Life and Historical Space in Ottoman Illustrated Journals," *Hist. Photogr.*, vol. 40, no. 3, pp. 330–357, Jul. 2016, Doi: 10.1080/03087298.2016.1215401

<sup>14</sup> Islamic calligraphy in Pakistan: A timeless art, <https://islamicartfestival.com/islamic-calligraphy-in-pakistan-a-timeless-art-form>

<sup>15</sup> Ghoush Siwani, The art of calligraphy, the legacy of India's shared civilization, <https://www.alifyar.com/khattaati-ka-fun-hindustan-ki-mushtarka-tahzeeb-ki-wiraasat-ghaus-siwani-articles>

<sup>16</sup> Asif Al, ARABIC CALLIGRAPHY ON MUGHAL MONUMENTS OF NORTH INDIA <https://doi.org/10.31436/japcm.v7i1.233>

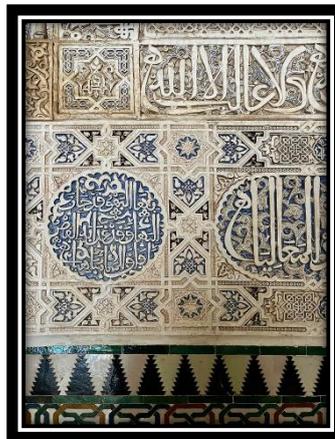
the Sheikh Zayed Grand Mosque in Abu Dhabi illustrate the continuity and adaptation of Islamic calligraphy in changing architectural contexts. These monuments together emphasize the ongoing importance of calligraphy as both a structural and metaphysical part of Islamic sacred architecture.

Pic: Qutub minar, Deahli, India



Mughal, Timurid, Ottoman, and Andalusian palaces, including the Red Fort in Delhi, the Alhambra in Granada, Top Kapi Palace in Istanbul, El Macroua Palace in Algeria, and Fatehpur Sikri, feature Arabic and Persian inscriptions that convey Qur’anic verses, royal titles, prayers, and expressions of political power. Urban monuments such as Alai Darwaza in Delhi, the Registan and Shah-i-Zinda complexes in Samarkand, and royal palaces in Rabat further show how calligraphy serves as a visual language of power, faith, and governance. Calligraphy on coins and portable objects reflects its role in everyday political and material culture.

Pic: Alhambra Palace, Granada, Spain



### Educational and Scholarly Institutions:

In places like Al-Azhar University in Cairo, Umm al-Qura University in Makkah, and Darul Uloom Deoband, madrasas preserve notable examples of Qur’anic writing<sup>17</sup> that highlight the strong connection between sacred knowledge and calligraphic art. Persianate traditions can be seen in institutions like the Bu Ali Sina Madrasa in Iran, the Sepa Salar Madrasa in Tehran, and madrasas in Shiraz where different scripts like Nasta‘liq, Kufic, and Thuluth are used to write Qur’anic verses, Hadith, and scholarly texts.

In South Asia and North Africa, places like the Ben Youssef Madrasa in Marrakesh and Jamia Nizamia in Hyderabad show how calligraphy is integrated with architectural

<sup>17</sup> G. Semprini et al., “Energy management in public institutional and educational buildings: The case of the school of engineering and architecture in Bologna,” *Energy Build.*, vol. 126, pp. 365–374, Aug. 2016, doi: 10.1016/J.ENBUILD.2016.05.009.

decoration to signify religious and cultural importance. Funerary architecture also shows the symbolic and devotional aspects of Islamic calligraphy.

#### **Funerary and Commemorative Placements:**

Major shrines such as the Shrines of Imam Husayn in Karbala and Imam Ali in Najaf illustrate the extensive use of Qur'anic inscriptions to make sacred spaces holy. In South and Central Asia, shrines like Data Ganj Bakhsh in Lahore, Shah Rukn-e-Alam in Multan, Bahauddin Zakariya in Multan, and Imam Bukhari in Samarkand reflect local preferences for Kufic, Nastalik, and Thuluth scripts combined with architectural symbols. Mausoleums such as the Taj Mahal in Agra, the tomb of Qutb al-Din Aibak, and the Gur-e-Amir of Timur in Samarkand show how monumental calligraphy emphasizes themes of mortality, divine authority, and imperial legitimacy. Islamic calligraphy goes beyond just religious contexts into palatial, civic, and governmental architecture.

Pic: Taj Mahal, Agra, India.



#### **Coins and Official Currency:**

Coinage from the Abbasid, Ghaznavid, Ottoman, and Mughal empires prominently used Kufic, Thuluth, Diwani, and Nastalik scripts to record Qur'anic phrases, royal names, and signs of administrative power<sup>18</sup>, with the Ottoman tughra serving as a unique imperial signature.



Pic: Coins in mughal and islamic era

#### **Legal and Documentary Texts:**

Calligraphy samples can be found in legal and documentary settings such as marriage contracts called Nikah Namas, endowment deeds, seals, and various official records. In the current time, calligraphy and illumination are often included in modern Nikah Namas, which typically use gold and traditional motifs, showing aspects of Islamic culture and aesthetic details.

<sup>18</sup> Danish Moin, *Islamic Calligraphy on Medieval Indian Coins: An Artistic Perspective*, The Center for Heritage Conservation, Mumbai, 2019, P 30



Pic: Muslim Nikah Nama

**Weapons and Military Objects:**

In history, Islamic calligraphy was present on items like swords, daggers, shields, and Armor, with Qur’anic verses, prayers, and names of the divine inscribed on them<sup>19</sup>. These inscriptions had meanings that were symbolic and protective, which helped to reinforce spiritual confidence along with their martial purposes.



Pic: Scissor and weapon

**Utensils and Domestic Objects:**

From ancient times to now, calligraphy has been used on bowls, plates, and various household vessels mainly for decoration. Arabic and Persian scripts are often used, with some being abstract and others functional, sometimes indicating ownership or intended use.



Pic: Decorative items

**Textiles and Soft Furnishings:**

Calligraphy plays an important role in textiles, which include garments, prayer mats, scarves, and dupattas. Arabic, Persian, and Urdu calligraphy contribute to both the aesthetic quality and cultural expression, appearing in clothing for both men and women, as well as in portable objects meant for devotion.

<sup>19</sup> [Islamic Coinage: Its Contribution towards Art and Calligraphy](https://www.academia.edu/39112889/Islamic_Coinage_Its_Contribution_towards_Art_and_Calligraphy)

[https://www.academia.edu/39112889/Islamic\\_Coinage\\_Its\\_Contribution\\_towards\\_Art\\_and\\_Calligraphy](https://www.academia.edu/39112889/Islamic_Coinage_Its_Contribution_towards_Art_and_Calligraphy)



Pic: women clothes adorned with calligraphy

**Jewellery and Personal Adornment:**

Calligraphic inscriptions are commonly found in personal adornments, especially in rings, pendants, and amulets. Words such as “Allah,” phrases from the Qur’an, or personal names are often delicately inscribed, continuing a tradition that was practiced by historical rulers and remains popular in the present day.



Pic: Jewellery items

**Decorative and Luxury Arts:**

Islamic calligraphy is widely used in decorative and luxury items, including wall hangings, woodwork, metalwork, and gifts. These works combine visual appeal with spiritual significance and continue to be a notable aspect of modern interior decoration and gift-giving practices



Pic: Gift giving practices

Overall, these examples show that Islamic calligraphy is more than just decorative. It acts as a unifying aesthetic, spiritual, and intellectual force across various domains such as religious, educational, political, and material aspects throughout Islamic history.

The calligraphy goes beyond decoration, expressing metaphysical ideas, political legitimacy, and divine authority, while transforming the palace itself into a poetic and intellectual monument of Nasrid Andalusian culture.<sup>20</sup>

<sup>20</sup> Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse education today*, 24(2), 105-112.



Pic: Prayer Mat

### **The Role of Calligraphy in Islamic Culture:**

This art plays a prominent part in the civilization of the Islamic world, which can be felt in various aspects, including:

#### **The religious aspect:**

Islamic calligraphy is also regarded as a means of propagation. Qur'anic calligraphy not only presents the words of revelation but also conveys Muslims' ideas as an inspired message. It is an enchanting written form that emerges with intellectual insight and then gradually travels from the soul to the eyes.

#### **The Moral Aspect:**

This aspect is based on awareness of religious rituals. Through calligraphy, one can understand the true reality of Allah's greatness. The teachings of the Quran, which calligraphers incorporate into their art, help readers understand the principles of a better and more meaningful life, enabling them to shape their lives in the light of Quranic verses.

The use of calligraphy in Islamic architecture also holds symbolic significance. Calligraphic patterns reflect the cultural and historical heritage of Islamic societies. Calligraphy is also used to enhance the beauty and elegance of buildings, and it is often combined with geometric designs and floral motifs.

In Islamic architecture, calligraphy is used for several important purposes and contains deep cultural meanings. Especially in mosques, calligraphy is extensively used in Islamic architecture to depict history, culture, and spirituality. It is a fundamental element that distinguishes Islamic architecture. Calligraphy is used to inscribe sacred Quranic texts and the teachings of the Prophet Muhammad PBUH on the walls, ceilings, windows, and other interior and exterior surfaces of mosques and buildings<sup>21</sup>. It reminds worshippers of the words and teachings of Allah Almighty.

When a calligrapher uses Arabic calligraphy as a decorative element with creative skill, it becomes an expression of his artistic excellence and creative power. The flexibility of Arabic letters helps the calligrapher create artworks that transcend the boundaries of time and civilizations. On this basis, the role of the calligrapher has gone beyond mere writing to become a spiritual artist who worships Allah through his calligraphic panels, engraving Quranic verses in a specific, worshipful style, from every glimpse of which the pleasure of worship is derived.<sup>22</sup>

#### **Conclusion:**

Islamic calligraphy is not only a visual form of art but also a practice that has symbolic and spiritual meanings that touch many aspects of Islamic life. From large buildings

<sup>21</sup> Naser Th. Al-Mughrabi, *The Design Characteristics of Arabic Calligraphy and The Extent of its Influence on Islamic Interior Design*, Doi: <https://doi.org/10.47 016/17.2.8>

<sup>22</sup> Al-Jabouri, Mahmoud Shukri, *Abhas Wal Maqalat fi Khat al Arabic*, Dar Al-Sharq Printing House, Beirut, Lebanon, 2005, P. 56.

to small household items, from coins to textiles, calligraphy serves as a link between the sacred, the beautiful, and the social and cultural aspects of life. Where it is placed on buildings, in places of worship, and on everyday items, it communicates religious messages, moral values, and social power while also improving the beauty and reflective nature of the surroundings. The study emphasizes that Islamic calligraphy, through its connection with geometric, plant, and decorative designs, continues to be an active form of expression that connects devotion, art, and cultural identity over many years.

### Bibliography:

- Al-Jabouri, M. S. (2005). *Abhas Wal Maqalat fi Khat al Arabic*. Dar Al-Sharq Printing House, Beirut, Lebanon, p. 56.
- Asif Ali, Arabic calligraphy on Mughal monuments of North India. <https://doi.org/10.31436/japcm.v7i1.233>
- Capozzoli, A., Corno, F., Corrado, V., & Gorrino, A. (2015). The overall architecture of a decision support system for public buildings. *Energy Procedia*. <https://doi.org/10.1016/J.EGYPRO.2015.11.318>
- Cariñanos, P., Casares-Porcel, M., de la Guardia, A. V. D., De la Cruz-Márquez, R., & de la Guardia, C. D. (2016). Charting trends in the evolution of the La Alhambra forest (Granada, Spain) through analysis of pollen-emission dynamics over time. *Climatic Change*.
- Danish, M. (2019). Islamic calligraphy on medieval Indian coins: An artistic perspective. The Center for Heritage Conservation, Mumbai, p. 30
- Eggleton, L. (2012). History in the making: The ornament of the Alhambra and the past-facing present. *Journal of Art Historiography*, 6, 1.
- Ersoy, A. A. (2016). Ottomans and the Kodak Galaxy: Archiving everyday life and historical space in Ottoman illustrated journals. *History of Photography*. <https://doi.org/10.1080/03087298.2016.1215401>
- Fragment, T. (2018). Arabic script and the art of calligraphy. The Metropolitan Museum of Art. [https://www.metmuseum.org/learn/educators/curriculum-resources/art-of-the-islamicworld/~/\\_media/Files/Learn/For%20Educators/Publications-for-Educators/Islamic%20Teacher%20Resource/Unit2.pdf](https://www.metmuseum.org/learn/educators/curriculum-resources/art-of-the-islamicworld/~/_media/Files/Learn/For%20Educators/Publications-for-Educators/Islamic%20Teacher%20Resource/Unit2.pdf)
- Gacek, A. (2009). *Arabic manuscripts: A Vad mecum for readers* (Vol. 98). Brill.
- George, A. (2009). Calligraphy, color and light in the Blue Qur'an. *Journal of Qur'anic Studies*.
- George, A. (2017). The Qur'an, calligraphy, and the early civilization of Islam. In *A Companion to Islamic Art and Architecture*.
- Ghoush Siwani. The art of calligraphy, the legacy of India's shared civilization. <https://www.alifyar.com/khattaati-ka-fun-hindustan-ki-mushtarka-tahzeeb-ki-wiraasat-ghaus-siwani-articles>
- Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*.
- Islamic calligraphy in Pakistan: A timeless art. <https://islamicartfestival.com/islamic-calligraphy-in-pakistan-a-timeless-art-form>
- Islamic coinage: Its contribution towards art and calligraphy. [https://www.academia.edu/39112889/Islamic\\_Coinage\\_Its\\_Contribution\\_towards\\_Art\\_and\\_Calligraphy](https://www.academia.edu/39112889/Islamic_Coinage_Its_Contribution_towards_Art_and_Calligraphy)
- M, A. W. M. F. E. E., & Panaxoside, M. (2014). The floral and geometrical elements on the Ottoman architecture in Rhodes Island. *Egyptian Journal of Archaeological & Restoration Studies*.
- Naser Th. Al-Mughrabi. The design characteristics of Arabic calligraphy and the extent of its influence on Islamic interior design. <https://doi.org/10.47016/17.2.8>

- Raina, S. (2005). Teaching Islamic religious art helps understand Islamic culture [M.A., The University of Arizona]. ProQuest Dissertations & Theses Global. <http://210.48.222.80/proxy.pac/docview/305025677?accountid=44024>
- Semprini, G., Corno, V., Corrado, V., & Gorrino, A. (2016). Energy management in public institutional and educational buildings: The case of the school of engineering and architecture in Bologna. Energy and Buildings <https://doi.org/10.1016/J.ENBUILD.2016.05.009>
- Yahya, A., & Embi, M. R. B. (2013). Evolution of Islamic geometric patterns. Frontiers of Architectural Research, <https://doi.org/10.1016/j.foar.2013.03.002>