

## JURISPRUDENTIAL ANALYSIS OF LOTUS SILK'S PERMISSIBILITY FOR MUSLIM MEN: A PRELIMINARY STUDY

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### ABSTRACT

*The emergence of lotus silk as an innovative sustainable textile has created significant jurisprudential considerations for Muslim men, particularly given the established Islamic prohibition of traditional silk. While classical Islamic jurisprudence demonstrates unanimous consensus (ijma') across all four madhahib prohibiting pure silk for men based on underlying principles ('illah) of avoiding luxury (tanaa'um), arrogance (khuyala'), and feminine characteristics, lotus silk presents novel challenges that existing frameworks have not comprehensively addressed. The research problem centers on the jurisprudential vacuum surrounding lotus silk evaluation, where contemporary fatawa demonstrate methodological inconsistency—some emphasizing material composition while others prioritizing final characteristics—resulting in unclear guidelines for scholars and consumers. This study employs qualitative library research methodology, utilizing content analysis of scientific literature and Islamic legal sources. The scientific review examines recent studies (2015-2024) on lotus silk's material properties, production methods, and commercial applications. The Islamic legal analysis focuses on classical jurisprudential foundations alongside contemporary fatawa from Malaysian religious authorities, particularly the 2024 fatwa from Jabatan Mufti Negeri Selangor addressing lotus silk. The findings reveal that classical jurisprudence provides robust precedent for characteristic-focused evaluation through extensive treatment of mixed silk fabrics (al-khazz), where scholars evaluated materials based on final characteristics rather than purely compositional factors. While lotus silk's plant-based origin avoids animal harm, its silk-like properties raise concerns about masculine norms and gender differentiation. Contemporary scholarly opinions trend toward discouraging lotus silk for men based on precautionary principles. The study concludes that developing clearer evaluation guidelines integrating both material composition and characteristic considerations is crucial for providing religious guidance on emerging textile innovations.*

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## INTRODUCTION

The emergence of lotus silk (*sutera teratai*) as an innovative textile has created a new intersection between sustainable fashion and Islamic jurisprudential considerations. While traditional silk from silkworms has established rulings in Islamic law, the development of lotus

silk presents important considerations regarding its use by Muslim men, particularly in light of recent religious guidance emphasizing the broader principles behind silk prohibition.

Lotus silk production, originating in Myanmar over a century ago, has expanded to Vietnam and Cambodia, representing a significant innovation in sustainable textile manufacturing (Thanh, 2021). The fabric is distinguished by its complex production process, where skilled artisans must extract fibers from lotus stems within 24 hours of harvesting to prevent fiber breakage (Laishram et al., 2022). Scientific analysis reveals that lotus fibers, while materially distinct from traditional silk, achieve similar aesthetic and tactile properties that characterize luxury textiles.

The Islamic legal framework regarding silk usage presents clear guidelines for male Muslims, rooted in fundamental principles about gender differentiation and modesty. Classical Islamic jurisprudence demonstrates unanimous consensus (*ijma'*) among all four *madhāhib* that pure silk is prohibited for men, with this consensus documented across authoritative sources including al-Kasani's *Badā'i' al-Sanā'i'* (1986), al-Kharshi's commentary on Mukhtasar Khalil (1317 AH), al-Hattab's *Mawahib al-Jalil* (1992), al-Jamal's *Hashiyah* (1996), and Ibn Qudamah's *al-Mughni* (1968). Recent religious rulings, particularly the 2024 fatwa from Jabatan Mufti Negeri Selangor, extend this consideration to lotus silk, recommending that men avoid its use despite its different botanical origin. This guidance emphasizes that the underlying wisdom (*hikmah*) behind silk prohibition relates not only to its material source but also to its characteristics of softness, luxury, and refinement, which are more aligned with feminine attributes.

This research adopts a multidisciplinary approach, combining scientific analysis of lotus silk's material properties with Islamic legal principles, particularly focusing on the wisdom behind textile regulations in Islamic law. This study aims to analyze the permissibility of lotus silk for Muslim men through a jurisprudential lens grounded in classical and contemporary sources. This research seeks to contribute to the broader understanding of how Islamic principles apply to contemporary innovations in ways that preserve their underlying purposes while addressing modern realities.

The introduction of lotus silk into the global textile market presents several important considerations for Islamic jurisprudence, particularly in relation to the principles underlying the prohibition of silk for men. While lotus silk differs materially from traditional silk, as it is derived from the stems of the lotus plant rather than silkworm cocoons, it embodies similar characteristics of softness, luxury, and refinement that originally factored into the prohibition of silk for men (Jabatan Mufti Negeri Selangor, 2024). These characteristics are central to the *'illah* (underlying reason) for the prohibition, which is rooted in avoiding extravagance, luxury, and the adoption of feminine attributes by men. The luxurious nature of lotus silk, which mirrors that of traditional silk, raises questions about whether the prohibition should extend to materials that achieve similar effects, even if they are derived from different sources.

This is particularly relevant given that Islamic jurisprudence often considers the final characteristics and societal perceptions of a material, not just its origin. Furthermore, the gender differentiation aspect of Islamic dress codes is a critical consideration. Lotus silk's softness and aesthetic appeal align closely with traditionally feminine characteristics, which could blur the lines of gender distinction in clothing—a principle strongly emphasized in Islamic teachings.

The Prophet Muhammad PBUH explicitly prohibited men from imitating women in dress and behaviour (al-Bukhari, 1422AH), and the adoption of fabrics like lotus silk, which are inherently luxurious and delicate, may conflict with this directive.

Additionally, the social impact of lotus silk cannot be overlooked. Its resemblance to traditional silk, both in texture and appearance, may lead to confusion among consumers, particularly in contemporary fashion contexts where the distinction between permissible and prohibited materials is not always clear. This ambiguity could undermine the religious boundaries established by Islamic law, as individuals may inadvertently wear materials that are impermissible or fail to adhere to the principles of modesty and humility.

However, a significant gap exists in contemporary Islamic jurisprudence regarding systematic evaluation criteria for novel textiles that are materially distinct from traditionally prohibited substances yet share their essential characteristics. While classical fiqh literature provides comprehensive rulings on traditional silk derived from silkworms, it lacks specific guidance for evaluating modern textile innovations like lotus silk that challenge conventional material-based categorizations. Contemporary *fatwa*, while addressing individual cases, demonstrate inconsistency in their methodological approaches—some emphasizing material composition while others prioritizing final characteristics—resulting in unclear guidelines for both scholars and consumers. This methodological inconsistency creates a jurisprudential vacuum where emerging sustainable textiles cannot be adequately evaluated within existing Islamic legal frameworks.

Therefore, the introduction of lotus silk necessitates a careful reevaluation of Islamic legal frameworks to address these challenges, ensuring that the principles of modesty, gender distinction, and avoidance of luxury are upheld in the face of evolving textile innovations. This study attempts to answer the following questions:

1. How do the underlying Islamic principles of silk prohibition for men apply to new materials that share similar characteristics?
2. What role do material composition and production methods play in determining textile permissibility when final characteristics mirror prohibited materials?
3. How should Islamic law address novel materials that, while technically different from prohibited substances, achieve similar effects and raise similar concerns?
4. What guidelines can be developed for evaluating future textile innovations in light of both material and characteristic-based considerations?

This study aims to:

1. Analyze the jurisprudential principles underlying textile prohibition for Muslim men, with particular focus on characteristics beyond material composition.
2. Evaluate how Islamic legal principles regarding gender differentiation and modesty apply to novel textiles with traditional silk-like properties.
3. Develop a framework for assessing new materials that considers both technical composition and resulting characteristics.
4. Provide comprehensive guidelines for Muslim consumers that reflect both material and characteristic-based considerations in textile choice.



## METHODOLOGY

This study employs a qualitative library research methodology, focusing on content analysis of both scientific literature and Islamic legal sources. The scientific literature review examines recent studies (2015-2024) on lotus silk's material properties, production methods, and commercial applications, including key works such as Cheng et al. (2017) on microwave irradiation extraction techniques, Tomar and Yadav (2019) on compositional analysis, and Floyd (2020) on production economics. Contemporary market analyses and technical documentation are also examined to understand lotus silk's characteristics, particularly its cellulose composition, extraction processes, and physical properties that make it comparable to traditional silk in terms of softness, luxury, and refinement. This scientific foundation provides the technical basis for understanding the material distinctions and similarities between lotus silk and traditional silkworm silk.

The Islamic legal analysis adopts a comprehensive approach, examining both classical jurisprudential foundations and contemporary religious rulings. The classical studies component analyzes authoritative texts from all four major schools of Islamic jurisprudence (*madhāhib*) to establish the fundamental principles underlying silk prohibition for men. Key classical sources include al-Kasani's *Badā'i' al-Sanā'i'* (1986) from the Hanafi tradition, al-Kharshi's commentary on Mukhtasar Khalil (1317 AH) and al-Hattab's *Mawahib al-Jalil* (1992) representing Maliki jurisprudence, al-Jamal's *Hashiyah* (1996) and al-Nawawi's works (1347 AH) from the Shafi'i school, and Ibn Qudamah's *al-Mughni* (1968) and al-Buhuti's texts (1993) from the Hanbali tradition. These classical sources are analyzed to understand the *'illah* (underlying reasoning) behind silk prohibition. Particular attention is given to classical discussions of mixed silk fabrics (*al-khazz*) and the various methodological approaches employed by different schools in evaluating materials that challenge conventional categorizations.

The contemporary *fatawa* analysis focuses on recent pronouncements from recognized Muslim authorities, particularly examining how modern religious scholars apply classical principles to novel materials. Key sources include the 2024 fatwa from Jabatan Mufti Negeri Selangor specifically addressing lotus silk, alongside related rulings from Jabatan Mufti Wilayah Persekutuan (2020) and Jabatan Mufti Negeri Pulau Pinang (2018) on silk usage. The analysis examines both the explicit rulings and their underlying principles, paying particular attention to how religious authorities approach novel materials that share characteristics with traditionally prohibited items.

## LITERATURE REVIEW

The emergence and development of lotus silk in the textile industry, coupled with its implications for Islamic jurisprudence, presents a complex landscape that requires careful examination. This review traces the evolution of both scientific understanding and religious rulings regarding lotus silk, particularly focusing on its permissibility for Muslim men.

## Scientific Studies

### *Foundational Studies and Material Characteristics*

The scientific understanding of lotus silk has evolved significantly over the past decade, beginning with foundational studies that established its basic characteristics. Zhao et al. (2015) conducted pioneering research that identified the precise measurements of lotus fiber, documenting a length range of 31-50 mm and a fineness of 3.963-4.516  $\mu\text{m}$ . These measurements established lotus silk's classification as a microfiber, providing the first scientific basis for understanding its unique properties. This technical foundation was substantially expanded by Cheng et al. (2017), who developed innovative extraction methods using microwave irradiation. Their research revealed the distinctive structure of lotus fibers, comprising a superfine fiber core and an external shell, with cellulose as its primary component.

The material science perspective was further enriched through subsequent studies that uncovered additional unique properties of lotus silk. Tomar and Yadav (2019) identified several distinctive characteristics, including antibacterial properties and super-hydrophobic qualities. They also provided a comprehensive analysis of lotus silk's composition, noting the presence of hemicellulose, fat waxy substances, lignin, ash, pectin, and amino acids alongside its primary cellulose component. These findings established lotus silk as a unique textile material with properties distinct from both traditional silk and other natural fibers.

### *Recent Technological Advancements and Applications*

Recent technological developments have significantly advanced both the extraction processes and applications of lotus silk. Nguyen and Nguyen (2024) developed comprehensive design data for an automatic lotus fiber extractor, addressing one of the traditional limitations of lotus silk production—its labor-intensive extraction process. Their research documented three key modules for automated extraction: workpiece feeding, fiber pulling, and fiber spinning. This technological advancement represents a significant step toward making lotus silk more commercially viable and potentially more accessible to consumers.

The versatility of lotus silk has been further demonstrated through innovative applications in biotechnology. Wang et al. (2024) developed a high-performance peptide biosensor utilizing the unified structure of lotus silk. Their research highlighted lotus silk's finest, resilient, naturally degradable, and low-cost properties, making it suitable for advanced technological applications. The study demonstrated that lotus silk-based sensors surpassed reported detection limits by at least one order of magnitude, emphasizing the material's superior performance characteristics. This research is particularly significant as it establishes lotus silk not merely as a textile alternative but as a high-performance material with technological applications.

### ***Sustainability and Environmental Considerations***

The environmental significance of lotus silk has gained increasing attention in recent years. Aishwariya and Thamima (2019) positioned lotus silk as an exemplar of sustainable textile production, noting its historical significance as a sacred fabric originally reserved for monks. This environmental perspective was further developed by Gupta (2020), who emphasized lotus silk's potential role in waste reduction and sustainable fashion. More recent work by Veenab and Hegde (2023) has placed lotus silk within the broader context of sustainable textiles, comparing it with other natural alternatives and highlighting its potential role in future sustainable fashion initiatives.

Dhama et al. (2024) provided a comprehensive review positioning lotus fiber as a sustainable alternative solution to silk fabric. Their analysis emphasized lotus fiber's distinctive properties including mechanical strength, flexibility, thermal stability, and lightweight nature. The study highlighted the sustainable aspects of lotus fiber, particularly its eco-friendliness and biodegradability, while acknowledging challenges related to production scalability and cost. This research is significant for the present study as it establishes the environmental credentials that may influence Islamic jurisprudential considerations, particularly given Islam's emphasis on environmental stewardship.

### ***Production Economics and Market Positioning***

The economic and production aspects of lotus silk were thoroughly documented by Floyd (2020), who highlighted its status as one of the world's most expensive fabrics. The research emphasized the labor-intensive nature of lotus silk production, noting that extracting enough fiber for a single scarf can take up to two months, contributing to its premium market position. This work was complemented by Laishram et al. (2022), who examined the economic impact of lotus silk production in Myanmar's Inle Lake region, particularly highlighting its role in providing employment opportunities for local women.

The economic considerations are particularly relevant for jurisprudential analysis, as the luxury status and high cost of lotus silk may influence its classification under Islamic principles regarding extravagance and ostentation.

### ***Comparative Analysis with Traditional Silk***

A crucial development in lotus silk research has been the comparative analysis with traditional silkworm silk. Yang et al. (2025) provided a comprehensive review of hierarchical design in silkworm silk for functional composites, highlighting the unique properties of traditional silk including enhanced mechanical strength, biocompatibility, and biodegradability. This research serves as an important benchmark for understanding the similarities and differences between traditional silk and lotus silk, particularly in terms of luxury characteristics and performance properties.



The comparison becomes more complex when considering functional applications. He et al. (2021) investigated the use of lotus seedpod extract for dyeing tussah silk fabric, demonstrating how lotus-derived materials can enhance traditional silk properties. Their research showed that lotus extract could impart excellent UV protection ability and antibacterial activity to silk fabric, suggesting a complementary rather than competitive relationship between lotus and silk materials in certain applications.

### ***Scientific-Religious Interface in Material Evaluation***

The scientific-religious interface in evaluating new textiles has been explored by several researchers. Kamarun et al. (2018) examined the halal attributes of various silk-like fibers from a scientific viewpoint, emphasizing the importance of integrating technical knowledge with religious considerations. This work was complemented by Ramli et al. (2023), who explored the application of *al-Intiqāl* (transition) theory to synthetically modified organisms, providing a potential framework for evaluating novel materials in Islamic law.

These methodological approaches suggest that comprehensive evaluation of lotus silk requires integration of both scientific analysis of material properties and careful consideration of Islamic legal principles. The *al-Intiqāl* theory, in particular, may provide a framework for understanding how the transformation from lotus plant to textile affects its legal classification.

## **Islamic Studies**

### ***Classical Jurisprudential Foundations***

The prohibition of silk for men in Islamic jurisprudence represents one of the most extensively discussed issues in classical fiqh literature. This section examines the positions of the four major schools of Islamic jurisprudence (*madhāhib*) regarding various aspects of silk usage, drawing from authoritative classical texts spanning several centuries of Islamic legal scholarship.

### ***Pure Silk for Women***

Classical Islamic scholars achieved unanimous consensus (*ijma'*) regarding the permissibility of pure silk for women. Al-Kasani (1986), al-Kharshi (1317 AH), al-Hattab (1992), al-Jamal (1996), and Ibn Qudamah (1968) all confirm that jurists across all *madhāhib* agree that pure silk (*al-ḥarīr al-musmat*) is completely permissible for women to wear and use. This consensus establishes a fundamental gender-based distinction in silk regulations that remains unchallenged across different schools of thought.

### ***Specific Non-Clothing Applications***

The classical sources demonstrate remarkable agreement on certain non-clothing uses of silk for men. Al-Kasani (1986), Ibn Abidin (1992), al-Hattab (1992), al-Jamal (1996), and al-Buhuti (1993) all concur that men may use silk for sewing clothes, making Qur'an cases, creating flags

and banners, and stuffing garments and furnishings. The unanimous reasoning across *madhāhib* centers on the absence of pride, arrogance, or vanity in these applications, as they do not constitute wearing or furnishing in the prohibited sense.

### ***Silk Usage During Warfare***

The classical literature reveals significant disagreement regarding silk usage during military campaigns. The Hanafi school shows internal division: while Abu Yusuf and Muhammad permit silk unconditionally during war, Abu Hanifa maintains absolute prohibition regardless of circumstances (al-Kasani, 1986). The Maliki position similarly divides, with Ibn al-Majishun allowing unconditional use, while the mainstream Maliki view prohibits it absolutely (al-Kharshi, 1317 AH; al-Hattab, 1992).

The Hanbali approach demonstrates sophisticated conditional reasoning. Ibn Qudamah (1968) documents that the mainstream Hanbali position permits silk during warfare only when there is genuine need (*hājah*). When no specific need exists, Hanbali scholars present two competing views: permission based on the argument that arrogance (*khuyala'*) is not blameworthy during war, and continued prohibition. Notably, Ahmad ibn Hanbal's apparent position favors unconditional permission (Ibn Qudamah, 1968).

### ***Medical and Necessity Exceptions***

Classical scholars show varying approaches to medical exceptions. Ibn Habib from the Maliki school specifically permits silk for skin conditions (*hal al-hakkah*) (al-Kharshi, 1317 AH; al-Hattab, 1992), supported by the hadith narrated by Anas regarding the Prophet's permission for Abd al-Rahman ibn Awf and al-Zubayr due to their skin condition (al-Bukhari, 1422AH). However, alternative Hanbali narrations question whether illness generally permits silk usage, suggesting the prophetic permission might have been specific to those two companions.

The Shafi'i school demonstrates the most expansive approach to necessity exceptions. Al-Jamal (1996) documents their position allowing silk for harmful heat or cold when no alternative exists, and for medical conditions like scabies that would be aggravated by other materials. This represents a significant expansion from the limited medical exceptions recognized by other schools.

### ***Mixed Silk Fabrics (Al-Khazz)***

The treatment of mixed silk fabrics reveals the most complex area of classical disagreement, with direct implications for contemporary discussions of alternative materials. The Hanafi position, as documented by al-Kasani (1986), distinguishes between wartime and peacetime applications. During war, garments with silk warp and non-silk weft are not disliked due to protection needs and psychological warfare considerations. Outside of war, such garments are disliked with prohibition intensity (*karahat al-tahrīm*) due to the absence of necessity.



The Maliki school presents multiple competing views. Ibn Rushd's preferred position, recorded by al-Kharshi (1317 AH), al-Dasuqi (2021), and al-'Adawi (1994), treats mixed silk as disliked (*makruh*) but not sinful—a position that recognizes it among doubtful matters (*mushtabihat*) where one is rewarded for avoidance but not punished for engagement. However, other Maliki scholars present three distinct positions: complete permission, dislike, and prohibition, with some preferring prohibition based on companion practices.

The Shafi'i and Hanbali approaches employ majority-rule principles but reach different conclusions for equal proportions. Both schools agree that majority-silk garments are prohibited (al-Jamal, 1996; al-Nawawi, 1347 AH; Ibn Qudamah, 1968), following the principle of giving precedence to the majority component. They similarly agree that majority non-silk garments are permissible, reasoning that silk becomes absorbed (*mustahlik*) in the other material and the garment cannot be called a 'silk garment'.

The critical difference emerges in equal-proportion scenarios. The Shafi'i school permits equal mixtures (al-Jamal, 1996; al-Nawawi, 1347 AH), while Hanbali scholars present conflicting views. Ibn Aqil argues for prohibition because "half is substantial," while al-Athram reports that Ahmad saw no problem with *al-khazz* (Ibn Qudamah, 1968).

### ***Contemporary Fatawa and Institutional Positions***

The Islamic legal framework regarding silk usage has been extensively developed through various fatawa bodies, especially in the Malaysian context. The Jabatan Mufti Wilayah Persekutuan (2020) has established clear guidelines regarding silk usage, emphasizing that the basic prohibition of silk for men extends beyond clothing to include prayer mats, decorative items, and furnishings. They specifically permit men to wear mixed silk only when the silk content is 50% or less, with exceptions granted for medical necessities and emergencies.

The Jabatan Mufti Negeri Pulau Pinang (2018) has provided more detailed classifications, dividing their rulings into three categories: pure silk (100%), mixed silk, and synthetic silk. Their fatwa explicitly prohibits pure silk for men in any form, whether as complete garments or partial elements. For mixed silk, they introduce the concept of *al-khazz* (mixed fabric), where permissibility depends on the dominance of non-silk elements. They also address specific scenarios such as two-layered garments (where one layer is silk) and three-layered garments (with silk in the middle), providing clear guidelines for each case.

The Jabatan Mufti Negeri Selangor (2017a) has taken a more precise approach, specifically prohibiting men from wearing or using two categories of silk: 100% pure silk and mixed silk where the silk content exceeds 51%. This quantitative threshold provides clear guidance for manufacturers and consumers alike. Their subsequent dress code guidelines for Islamic premises (Jabatan Mufti Negeri Selangor, 2017b) further reinforce these prohibitions, emphasizing the importance of avoiding silk in professional and official contexts.

### ***Specific Ruling on Lotus Silk***

Recent developments have seen *fatawa* bodies addressing more contemporary issues. The Jabatan Mufti Negeri Selangor's 2024 fatwa on lotus silk represents a significant evolution in how religious authorities approach novel materials. While acknowledging lotus silk's distinct botanical origin, the fatwa recommends against its use by men based on its characteristics rather than its source. This ruling demonstrates a sophisticated approach that considers not just material composition but also properties and social implications.

This fatwa is particularly significant as it establishes a precedent for evaluating new textile materials based on their final characteristics rather than solely on their material origin. This approach aligns with classical Islamic legal principles that consider the underlying wisdom (*'illah*) behind prohibitions rather than merely their literal applications.

### ***International Perspectives and Comparative Rulings***

International *fatawa* bodies have also contributed to this discourse. Darul Ifta Birmingham (2022, 2011) has consistently maintained that while synthetic silk is permissible, mixed silk must contain less than 50% silk content to be acceptable for men. Islamqa.info (2002) and Islamweb.net (2015) both address synthetic silk, with the former emphasizing its permissibility due to different origin, while the latter introduces cautionary notes about materials that closely resemble natural silk.

The Arabic *fatawa* sources provide additional depth to these rulings. Fatawapedia.com (2020) and other Arabic sources emphasize that the prohibition specifically targets natural silk from silkworms, while showing more flexibility toward synthetic alternatives. However, they maintain cautionary stances when these alternatives closely mimic traditional silk's characteristics.

### ***Halal Industry Applications and Contemporary Challenges***

The broader context of halal industry regulation provides important insights for understanding how Islamic law adapts to contemporary materials and technologies. Wong and Abdul Halim (2021) examined the concept of Hisbah in halal enforcement compliance in Malaysia, highlighting the complexities of ensuring adherence to Islamic principles in rapidly evolving markets. Their research identified significant challenges in halal enforcement mechanisms, particularly regarding consumer knowledge and understanding of compliance standards.

This study is particularly relevant to lotus silk considerations, as it demonstrates the practical challenges of implementing Islamic legal principles in contemporary commercial contexts. The authors noted that the halal market is gaining global traction but faces problems with fraud, misuse of logos, and other offenses from both Shariah and technical perspectives. These findings suggest that clear guidelines for novel materials like lotus silk are essential for effective enforcement and consumer protection.

### ***Biotechnology and Pharmaceutical Applications in Islamic Law***

The application of Islamic legal principles to biotechnology offers important parallels for understanding how contemporary Islamic jurisprudence approaches novel materials. Jaludin et al. (2018) examined halal issues in biotechnology applications against selected pharmaceutical products, employing *Maqasid al-Shariah* principles to evaluate complex modern applications. Their research emphasized that halal status depends on the source of raw materials, additives in processing, and logistics processes—considerations that directly parallel the evaluation of textile materials like lotus silk.

The study identified the concepts of *Istihālah* (transformation) and *ḍarurah* (necessity) as key principles in determining the permissibility of products with doubtful halal status. These concepts may be relevant to lotus silk evaluation, particularly in considering whether the transformation from lotus plant to textile material affects its classification under Islamic law.

### ***Islamic Business Growth and Sustainable Practices***

Maharani and Ulum (2020) examined halal tourism and its effect on Islamic business growth, providing insights into how Islamic principles can accommodate and promote sustainable practices. Their research emphasized that Islam as *ad-Dīn* (way of life) establishes value systems that apply to every aspect of life, including economic activities and material choices.

This perspective is significant for lotus silk considerations, as it suggests that Islamic law actively seeks to promote practices that align with religious values while delivering benefits to mankind. The emphasis on sustainable practices in Islamic business contexts may support favourable consideration of environmentally sustainable materials like lotus silk, provided they align with other Islamic principles.

## **DISCUSSION AND FINDINGS**

The prohibition of silk for men in Islamic law is a well-established ruling derived from the Hadith. However, with the advent of modern textile technologies, new materials such as lotus silk and synthetic silk have emerged, raising questions about their permissibility under Islamic law. This research explores the underlying principles of silk prohibition, the role of material composition and production methods, and how Islamic jurisprudence should address novel materials that mimic the characteristics of prohibited substances. Additionally, it proposes guidelines for evaluating future textile innovations in light of both material and characteristic-based considerations.

### **Islamic Principles and Silk Prohibition for Men**

The prohibition of silk for men is rooted in several Hadiths, such as the one narrated by Abu Musa, where the Prophet Muhammad (peace be upon him) said, “*Gold and silk have been permitted for the females of my Ummah and forbidden for the males*” (al-Nasa’i, 2001). This prohibition is based on the principle of avoiding luxury and extravagance, which can lead to



arrogance and a departure from the simplicity and humility encouraged in Islam. The underlying reason (*'illah*) for the prohibition is the softness, luxury, and femininity associated with silk, which are considered inappropriate for men (Al-Bakri, 2023).

Classical Islamic jurisprudence demonstrates sophisticated understanding of these underlying principles. The unanimous consensus (*ijma'*) among classical scholars regarding pure silk prohibition for men (al-Kasani, 1986; al-Kharshi, 1317 AH; al-Hattab, 1992; al-Jamal, 1996; Ibn Qudamah, 1968) establishes that the prohibition extends beyond mere material identification to encompass the concepts of luxury (*tanaa'um*), arrogance (*khuyala'*), and feminine characteristics. Classical scholars consistently emphasized that the *'illah* centers on avoiding these attributes rather than solely focusing on the silkworm origin of the material.

The classical treatment of mixed silk fabrics (*al-khazz*) provides particularly relevant precedent for lotus silk evaluation. The Hanafi position distinguishes between contexts, treating silk-mixed garments as prohibited due to luxury meanings (al-Kasani, 1986), while the Maliki approach recognizes such materials among doubtful matters (*mushtabihat*) where caution is rewarded (al-Kharshi, 1317 AH; al-Dasuqi, 2021). The Shafi'i and Hanbali schools employed majority-rule principles, demonstrating that classical scholars already grappled with materials that challenged simple categorizations (al-Jamal, 1996; al-Nawawi, 1347 AH; Ibn Qudamah, 1968).

When considering new materials like lotus silk, which shares similar characteristics with traditional silk, it is essential to examine whether the same *'illah* applies. Lotus silk, derived from the stems of the lotus plant, is known for its softness, breathability, and luxurious feel, much like traditional silk (Cheng et al., 2017). Therefore, the question arises: does the prohibition of silk extend to materials that share its characteristics, even if they are derived from different sources?

## Material Composition and Production Methods

The material composition and production methods play a crucial role in determining the permissibility of textiles in Islamic law. Traditional silk is produced from the cocoons of silkworms, a process that involves the killing of the silkworm, which is a form of harm to living creatures. In contrast, lotus silk is extracted from the stems of the lotus plant, a process that does not involve harm to animals (Ngoc Thanh, 2021). This distinction is significant because Islamic law places a strong emphasis on avoiding harm (*darar*) and promoting benefit (*maṣlaḥah*).

Classical Islamic jurisprudence provides sophisticated frameworks for evaluating material composition versus final characteristics. The extensive classical discussions of mixed fabrics reveal that scholars considered both material origins and resulting properties. The Shafi'i and Hanbali principle that silk becomes 'absorbed' (*mustahlik*) in other materials when it constitutes a minority demonstrates early recognition that transformation processes could affect legal classification (al-Jamal, 1996; Ibn Qudamah, 1968). This absorption principle (*istihlak*) parallels contemporary concepts of transformation (*istiḥālah*) relevant to lotus silk evaluation.

The classical Maliki recognition of mixed materials as *mushtabihat* (doubtful matters) offers particularly relevant precedent, suggesting that materials sharing characteristics with

prohibited substances require careful evaluation even when their composition differs (al-Kharshi, 1317 AH; al-Dasuqi, 2021; al-Adawi, 1994). Ibn Rushd's position that such materials warrant reward for avoidance but not punishment for use demonstrates classical flexibility in addressing materials that challenge conventional categorizations.

Synthetic silk, on the other hand, is entirely man-made and does not involve any animal or plant sources. It is produced through chemical processes that mimic the properties of natural silk (Kamarun et al., 2018). Since synthetic silk does not involve the use of silkworms or any other living creatures, it is generally considered permissible (halal) for men to wear. However, some scholars caution against wearing synthetic silk that closely resembles natural silk in texture and appearance, as it may lead to confusion or imitation of prohibited materials (Islamqa.info, 2002).

### Novel Materials and Islamic Legal Frameworks

The emergence of novel materials like lotus silk and synthetic silk presents a challenge for Islamic jurisprudence. While these materials are technically different from traditional silk, they achieve similar effects in terms of softness, luxury, and aesthetic appeal (Floyd, 2020). This raises the question of whether the prohibition of silk should be extended to materials that mimic its characteristics, even if they are derived from different sources.

Classical Islamic jurisprudence provides robust precedent for *'illah*-based analysis of novel materials. The consistent classical emphasis across all *madhāhib* on luxury (*tanaa'um*), arrogance (*khuyala'*), and feminine characteristics as the core concerns demonstrates that material origin alone was never the sole determinant (al-Kasani, 1986; al-Kharshi, 1317 AH; al-Jamal, 1996; Ibn Qudamah, 1968). The classical treatment of mixed fabrics (*al-khazz*) reveals that scholars regularly evaluated materials based on their final characteristics and social implications rather than purely compositional factors.

The Hanafi distinction between wartime and peacetime usage of mixed silk demonstrates classical recognition that context affects the realization of the prohibition's *'illah* (al-Kasani, 1986). During war, the luxury and arrogance concerns are mitigated by practical necessity, suggesting that classical scholars understood the *'illah* as contextually realized rather than materially inherent. This contextual sensitivity provides precedent for considering how lotus silk's luxury characteristics manifest in contemporary social contexts.

Islamic legal frameworks, such as the concept of *'illah* (underlying reason), can be applied to address this issue. If the *'illah* for the prohibition of silk is its luxurious and feminine nature, then materials that share these characteristics, regardless of their source, may also be subject to the same prohibition (Al-Bakri, 2023). However, if the *'illah* is specific to the harm caused to silkworms or the process of silk production, then materials like lotus silk and synthetic silk, which do not involve such harm, may be considered permissible.

### Guidelines for Evaluating Future Textile Innovations

To address the challenges posed by future textile innovations, it is essential to develop guidelines that consider both material composition and the final characteristics of the textile.

These guidelines should be based on the principles of Islamic jurisprudence, including the avoidance of harm, the promotion of benefit, and the preservation of modesty and humility.

Classical Islamic jurisprudence provides established methodological frameworks for such evaluation. The Maliki concept of *mushtabihat* (doubtful matters) offers precedent for cautious approaches to novel materials, while the Shafi'i and Hanbali majority-rule principles provide quantitative frameworks for mixed materials (al-Kharshi, 1317 AH; al-Jamal, 1996; Ibn Qudamah, 1968). The classical recognition of contextual factors—warfare necessity, medical conditions, and social customs—demonstrates that evaluation frameworks must consider multiple dimensions beyond material composition.

1. **Material Source:** Textiles derived from plant sources, such as lotus silk, should be evaluated based on their production methods and whether they involve any harm to living creatures. If the production process is ethical and does not involve harm, the textile may be considered permissible (Cheng et al., 2017). Classical precedent from the unanimous permission for specific non-clothing silk applications demonstrates that ethical production methods can influence permissibility (al-Kasani, 1986; Ibn Abidin, 1992; al-Hattab, 1992; al-Jamal, 1996; al-Buhuti, 1993).
2. **Final Characteristics:** Textiles that mimic the luxurious and feminine characteristics of silk, regardless of their source, should be evaluated based on the *'illah* of the prohibition. If the *'illah* is the luxurious nature of the material, then such textiles may be subject to the same prohibition as traditional silk (Al-Bakri, 2023). The classical emphasis on luxury (*tanaa'um*) and feminine characteristics across all *madhāhib* supports this characteristic-focused approach (al-Kasani, 1986; al-Kharshi, 1317 AH; al-Jamal, 1996; Ibn Qudamah, 1968).
3. **Synthetic Materials:** Synthetic textiles that do not involve any animal or plant sources and are produced through ethical means should generally be considered permissible. However, caution should be exercised to avoid materials that closely resemble prohibited substances, as this may lead to confusion or imitation (Islamqa.info, 2002). Classical precedent for this caution appears in the Maliki treatment of mixed materials as *mushtabihat* requiring careful evaluation (al-Kharshi, 1317 AH; al-Dasuqi, 2021).
4. **Cultural and Societal Influences:** The cultural and societal context in which the textile is used should also be considered. If a particular textile is widely associated with luxury and extravagance, it may be subject to stricter scrutiny under Islamic law (Jabatan Mufti Negeri Selangor, 2017a). The classical Shafi'i consideration of social custom (*mukhalafat al-'ādah*) in evaluating silk lining provides precedent for incorporating social perceptions into legal evaluation (al-Jamal, 1996).

### Comparative Analysis of Traditional and Modern Textiles

A comparative analysis of traditional silk, lotus silk, and synthetic silk reveals significant differences in their production methods and material sources. Traditional silk involves the killing of silkworms, which raises ethical concerns, while lotus silk is derived from plant



sources and does not involve harm to animals (Ngoc Thanh, 2021). Synthetic silk, being entirely man-made, avoids these ethical concerns altogether (Kamarun et al., 2018).

Classical Islamic jurisprudence anticipated such comparative challenges through its sophisticated treatment of mixed and alternative materials. The classical unanimous agreement on certain silk applications while disagreeing on others demonstrates that even traditional silk generated nuanced analysis (al-Kasani, 1986; Ibn Abidin, 1992; al-Hattab, 1992; al-Jamal, 1996; al-Buhuti, 1993). The extensive classical disagreements over mixed silk fabrics (*al-khazz*) reveal that scholars regularly engaged in comparative analysis of materials with varying compositions but similar characteristics.

However, all three materials share similar characteristics in terms of softness, luxury, and aesthetic appeal. This raises the question of whether the prohibition of silk should be extended to materials that mimic its characteristics, even if they are derived from different sources. Islamic jurisprudence must carefully balance the principles of avoiding harm and promoting benefit with the need to preserve modesty and humility in dress.

The classical recognition that the *'illah* of silk prohibition centers on luxury and feminine characteristics rather than material origin provides strong precedent for extending scrutiny to materials achieving similar effects. The Hanafi treatment of mixed silk as problematic due to realized luxury meanings (*ma'na al-tanaa'um*) despite different composition demonstrates this characteristic-focused approach (al-Kasani, 1986).

### **Ethical and Environmental Considerations**

In addition to the legal and ethical considerations, the environmental impact of textile production should also be taken into account. Lotus silk, for example, is considered an eco-friendly and sustainable textile, as it is derived from a renewable plant source and does not involve harmful chemicals or processes (Tomar & Yadav, 2019). Synthetic silk, while not derived from natural sources, can also be produced in an environmentally sustainable manner if the production process is carefully managed (Kamarun et al., 2018).

Islamic teachings emphasize the importance of environmental stewardship and the responsible use of natural resources. Therefore, textiles that are produced in an environmentally sustainable manner should be given preference, provided they do not violate other Islamic principles (Aishwariya & Thamima, 2019).

Classical Islamic jurisprudence demonstrates awareness of broader ethical considerations beyond immediate material concerns. The classical recognition of medical necessity exceptions (al-Kharshi, 1317 AH; al-Hattab, 1992; al-Jamal, 1996) and contextual factors like warfare needs (al-Kasani, 1986; Ibn Qudamah, 1968) shows that scholars balanced multiple ethical considerations in their evaluations. This holistic approach provides precedent for considering environmental stewardship alongside traditional concerns about luxury and gender appropriateness.

## Practical Applications and Contemporary Challenges

The practical application of these guidelines presents several challenges. For example, the production of lotus silk is labor-intensive and requires skilled craftsmanship, which limits its availability and increases its cost (Floyd, 2020). Synthetic silk, while more readily available, may not always meet the ethical and environmental standards required by Islamic law (Islamqa.info, 2002).

Furthermore, the widespread availability of synthetic materials that mimic the characteristics of prohibited substances can lead to confusion among consumers. It is essential for Islamic scholars and textile manufacturers to work together to develop clear guidelines and labeling systems that help consumers make informed choices (Jabatan Mufti Negeri Selangor, 2017b).

Classical Islamic jurisprudence anticipated practical implementation challenges through its recognition of *mushtabihat* (doubtful matters) requiring careful evaluation and consumer education. The Maliki position that mixed materials warrant reward for avoidance demonstrates classical awareness that practical compliance requires clear guidance for consumers (al-Kharshi, 1317 AH; al-Dasuqi, 2021). The classical development of quantitative thresholds for mixed materials shows precedent for providing concrete guidance to manufacturers and consumers.

The prohibition of silk for men in Islamic law is based on principles of avoiding luxury, extravagance, and harm to living creatures. With the advent of new materials like lotus silk and synthetic silk, it is essential to carefully evaluate their permissibility based on their material composition, production methods, and final characteristics. Islamic jurisprudence provides a robust framework for addressing these challenges, but it requires careful consideration of the underlying principles and the cultural and societal context in which these materials are used. By developing clear guidelines for evaluating future textile innovations, Islamic scholars and textile manufacturers can ensure that new materials are both ethically and environmentally sustainable, while also adhering to the principles of Islamic law. This will help to preserve the values of modesty, humility, and environmental stewardship that are central to Islamic teachings.

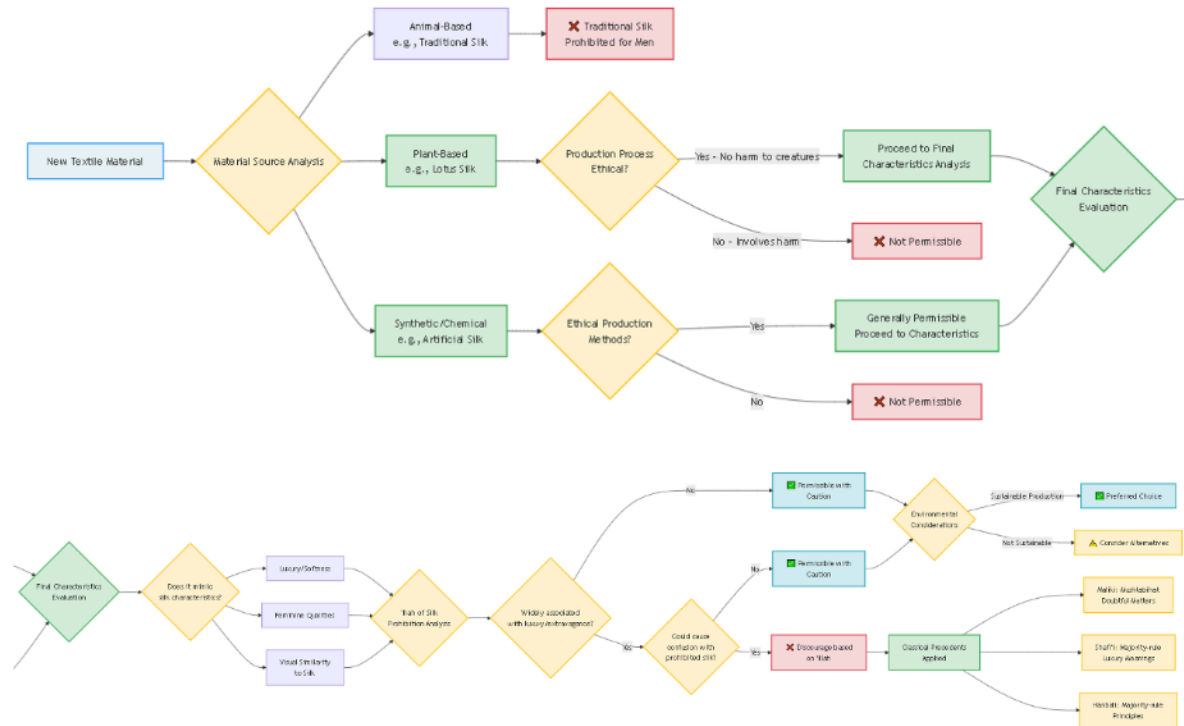


Diagram 1: Islamic Jurisprudential Framework for Novel Textile Evaluation

## CONCLUSION

This study successfully achieved its four primary research objectives through comprehensive analysis of classical Islamic jurisprudence and contemporary religious rulings regarding lotus silk permissibility for Muslim men.

First objective on analyzing jurisprudential principles beyond material composition established that classical Islamic jurisprudence demonstrates sophisticated understanding of textile prohibition principles extending beyond material identification. The unanimous consensus (*ijma'*) among all four *madhahib* reveals that silk prohibition centers on avoiding luxury (*tanaa'um*), arrogance (*khuyala'*), and feminine characteristics rather than solely focusing on silkworm origin. Classical treatment of mixed silk fabrics (*al-khazz*) provides particularly relevant precedent, with scholars employing characteristic-focused evaluation rather than purely compositional analysis. The Hanafi concept of realized luxury meanings (*ma'na al-tanaa'um*) and the Maliki recognition of doubtful matters (*mushtabihat*) demonstrate that classical scholars prioritized final characteristics and social implications over material sources.

Second objective on evaluating gender differentiation and modesty principles confirmed that Islamic legal principles regarding gender differentiation and modesty directly apply to lotus silk despite its botanical origin. The 2024 Selangor fatwa exemplifies this application, recommending against lotus silk use for men based on its silk-like properties that align with feminine characteristics of softness, luxury, and refinement. Classical jurisprudence



consistently emphasized that materials promoting feminine attributes or blurring gender distinctions violate fundamental Islamic principles, regardless of their material composition. The research demonstrates that lotus silk's aesthetic and tactile properties achieve similar effects to traditional silk in terms of luxury appeal and gender implications.

Third objective on developing assessment framework for novel materials successfully created a comprehensive framework integrating both technical composition and resulting characteristics. This framework incorporates classical methodological approaches including the Maliki *mushtabihat* concept for cautious evaluation, Shafi'i and Hanbali majority-rule principles for quantitative assessment, and contextual considerations from warfare and medical exceptions. The framework addresses material source ethics, final characteristics evaluation, synthetic material considerations, and cultural context analysis. The visual flowchart diagram provides practical implementation guidance for scholars and consumers, establishing clear evaluation criteria for future textile innovations.

Fourth objective on providing comprehensive consumer guidelines established clear guidelines reflecting both material and characteristic-based considerations. The findings indicate that while lotus silk's plant-based origin avoids animal harm concerns, its silk-like characteristics warrant discouraged classification for men based on precautionary principles. The study provides concrete recommendations: lotus silk should be avoided by Muslim men due to its luxury characteristics and potential for gender distinction confusion, synthetic alternatives require careful evaluation based on their resemblance to prohibited materials, and environmental sustainability considerations must be balanced with fundamental Islamic principles regarding gender differentiation and modesty.

The research concludes that lotus silk evaluation requires characteristic-focused analysis rather than purely compositional assessment. Contemporary scholarly consensus trends toward discouraging lotus silk for men, supported by robust classical precedent emphasizing the underlying *'illah* of avoiding luxury and femininity. This study contributes significantly to Islamic jurisprudential methodology for evaluating emerging textile innovations, establishing precedent for future materials that challenge conventional categorizations while preserving essential Islamic principles regarding gender differentiation, modesty, and luxury avoidance.

## REFERENCES

- Akbar, A. F. R., Munawar, A. M., Lutfiyah, S. S., Sari, U., & Husna, N. I. (2023). Analisis takhrij hadis larangan memakai sutra dalam kitab al-Mu'jam al-Kabir al-Tabrani. *KACA (Karunia Cahaya Allah): Jurnal Dialogis Ilmu Ushuluddin*, 13(2).
- Aishwariya, S., & Thamima, S. (2019). Sustainable textiles from lotus. *Asian Textile Journal*, 28(10).
- Al-'Adawi, A. ibn A. (1994). *Hashiyat al-'Adawi 'ala sharh kifayat al-talib al-rabbani*. Dar al-Fikr.
- Al-Bakri, Z. M. (2023, March 15). 'Illah dan sebab ditegah memakai sutera tiruan bagi lelaki. *Maktabah Al-Bakri*. <https://maktabahalbakri.com/3657-illah-dan-sebab-ditegah-memakai-sutera-tiruan-bagi-lelaki/>
- Al-Buhuti, M. ibn Y. (1968). *Kashshaf al-qina' 'an matn al-ig'na'*. Maktabat al-Nasr al-Hadithah.

- Al-Buhuti, M. ibn Y. (1993). *Sharh muntaha al-iradat*. 'Alam al-Kutub.
- Alfani, M., & Fauziyah, F. (2024). Larangan emas dan sutera untuk laki-laki: Fakta dan penjelasan dalam hadis. *MUSHAF Journal: Jurnal Ilmu Al Quran dan Hadis*, 4(2).
- Cheng, C., Guo, R., Lan, J., & Jiang, S. (2017). Extraction of lotus fibres from lotus stems under microwave irradiation. *Royal Society Open Science*, 4(9), 170747. <https://doi.org/10.1098/rsos.170747>
- Darul Ifta Birmingham. (2011, August 15). Mixture of silk and cotton. <https://daruliftabirmingham.co.uk/home/mixture-of-silk-and-cotton/>
- Darul Ifta Birmingham. (2022, March 20). Can a man use or wear garments made from artificial silk. <https://daruliftabirmingham.co.uk/home/can-a-man-use-or-wear-garments-made-from-artificial-silk/>
- Al-Dasuqi, M. ibn A. ibn 'A. (2021). *Hashiyat al-Dasuqi 'ala al-sharh al-kabir*. Dar Ibn Hazm.
- Dhama, A., Singh, P., & Azad, M. L. (2024). Lotus fibre: A sustainable alternative solution to silk fabric—A review. *Man-Made Textiles in India*, 52(2), 49-53.
- Floyd, C. (2020, November 25). Why lotus silk is one of the most expensive fabrics in the world. *Business Insider*. <https://www.businessinsider.com/lotus-silk-most-expensive-fabrics-in-the-world-vietnam-2020-11>
- Al-Hattab, M. ibn M. ibn 'A. (1992). *Mawahib al-jalil fi sharh mukhtasar Khalil*. Dar al-Fikr.
- He, H., Wang, Y., Liu, J., Zhou, N., Zhao, Y., & Yu, Z. (2021). A natural dye extract from lotus seedpod for dyeability and functional property of tussah silk fabric. *Pigment and Resin Technology*, 50(6), 545-553. <https://doi.org/10.1108/PRT-10-2020-0107>
- Hoang, P. T. T., Dao, T. L., Le, T. H. L., & Nguyen, T. H. Y. (2018). Techniques of weaving silk from self-woven silkworms and lotus thread of artisan Phan Thi Thuan in Phung Xa craft village, My Duc district, Ha Noi, Vietnam. *International Journal of Science and Research*, 8(10).
- Ibn 'Abidin, M. A. ibn 'U. (1992). *Radd al-muhtar 'ala al-durr al-mukhtar*. Dar al-Fikr.
- Ibn Qudamah, 'A. ibn A. (1968). *Al-Mughni*. Maktabat al-Qahirah.
- Islamqa.info. (2002, December 15). Ruling on artificial silk. <https://islamqa.info/en/answers/30812/ruling-on-artificial-silk>
- Islamweb.net. (2015, June 10). Ruling on wearing synthetic silk by men. <https://www.islamweb.net/en/fatwa/7829/ruling-on-wearing-synthetic-silk-by-men>
- Jabatan Mufti Kerajaan Negeri Sembilan. (2019, April 5). Memakai baju sutera campuran. <https://muftins.gov.my/soaljawab/memakai-baju-sutera-campuran/>
- Jabatan Mufti Negeri Pulau Pinang. (2018, September 12). Hukum penggunaan benang sutera pakaian batik dan tenun dalam industri batik di Malaysia. [http://efatwa.penang.gov.my/fatwa\\_details.php?fatwaid=1291](http://efatwa.penang.gov.my/fatwa_details.php?fatwaid=1291)
- Jabatan Mufti Negeri Selangor. (2017a). *Garis panduan etika berpakaian bagi orang Islam di premis-premis kerajaan Negeri Selangor*. Jabatan Mufti Negeri Selangor.
- Jabatan Mufti Negeri Selangor. (2017b, July 11). Hukum penggunaan tekstil berasaskan sutera. <https://www.muftiselangor.gov.my/2023/10/27/hukum-penggunaan-tekstil-berasaskan-sutera/>
- Jabatan Mufti Negeri Selangor. (2024, May 2). Hukum lelaki memakai sutera teratai. <https://www.muftiselangor.gov.my/2024/05/02/52-taudhih-al-hukmi-hukum-lelaki-memakai-sutera-teratai/>
- Jaludin, R. O., Man, S., & Baharuddin, M. (2018). Halal issues in biotechnology applications against selected pharmaceutical products. *Jurnal Islam Dan Masyarakat Kontemporari*, 19, 74-90. <https://doi.org/10.37231/jimk.2018.19.0.284>
- Al-Jamal, S. ibn 'U. (1996). *Hashiyat al-Jamal 'ala sharh al-manhaj*. Dar al-Fikr.
- Al-Kharshi, M. ibn 'A. (1317 AH). *Sharh mukhtasar Khalil*. Dar al-Fikr li al-Tiba'ah.
- Kamarun, D., Omar, K., Rosman, A. S., Mohd Yusof, F., Hussain, L., Mohamad, A. M., &

- Mohd Yusof, F. Z. (2018). Silk and silk-like fibres: Halal attributes from a scientific viewpoint. In *Proceedings of the 3rd International Halal Conference (INHAC 2016)*. Springer.
- Al-Kasani, A. B. ibn M. (1986). *Bada'i' al-sana'i' fi tartib al-shara'i'*. Dar al-Kutub al-'Ilmiyyah.
- Laishram, D., Sethi, B., & Tengli, M. B. (2022). Lotus fibre: A rarest fabric. *Science for Agriculture and Allied Sector*, 4(12).
- Maharani, S., & Ulum, M. (2020). Halal tourism and its effect to Islamic business growth. *Jurnal Islam Dan Masyarakat Kontemporari*, 21(1), 104-119. <https://doi.org/10.37231/jimk.2020.21.1.439>
- Al-Nawawi, M. al-D. Y. ibn S. (1347 AH). *Al-Majmu' sharh al-muhadhdhab*. Idarat al-Tiba'ah al-Munirah.
- Nguyen, N.-K., & Nguyen, V.-T. (2024). Design and manufacturability data of automatic lotus fiber extractor. *Data in Brief*, 53, Article 110175. <https://doi.org/10.1016/j.dib.2024.110175>
- Pejabat Mufti Wilayah Persekutuan. (2016, November 3). Emas dan sutera haram bagi lelaki. <https://muftiwp.gov.my/ms/artikel/al-kafi-li-al-fatawi/1759>
- Pejabat Mufti Wilayah Persekutuan. (2020a, August 20). Hukum lelaki memakai pakaian bercampur sutera. <https://www.muftiwp.gov.my/ms/artikel/al-kafi-li-al-fatawi/4622>
- Pejabat Mufti Wilayah Persekutuan. (2020b, June 15). Menggunakan sejadah daripada sutera bagi lelaki. <https://www.muftiwp.gov.my/ms/artikel/irsyad-hukum/umum/4367>
- Prawira, R. E., Firdaus, M. Y., Adnan, & Rosyad, R. (2022). Penggunaan sutra untuk terapi penyakit bagi laki-laki: Studi takhrij hadis. *Gunung Djati Conference Series*, 8.
- Ramli, S. N. H., Jamaludin, M. A., Nordin, N. F. H., & Abdullah Sani, M. S. (2023). The application of al-Intiqal (the transition) on synthetically modified organisms (SMOs): An analysis from Shariah and science approaches. *UMRAN - International Journal of Islamic and Civilizational Studies*, 10(2).
- Thanh, N. (2021, June 15). The art of making silk from lotus stem. *VnExpress International*. <https://e.vnexpress.net/news/life/trend/the-art-of-making-silk-from-lotus-stem-4306959.html>
- Tomar, S., & Yadav, N. (2019). Lotus fiber: An ecofriendly textile fiber. *International Archive of Applied Sciences and Technology*, 10(2).
- Wang, Z., Ma, W., Wei, J., Lan, K., Yan, S., Chen, R., & Qin, G. (2024). High-performance peptide biosensor based on unified structure of lotus silk. *Talanta*, 276, Article 126280. <https://doi.org/10.1016/j.talanta.2024.126280>
- Wong, M. S. M. A., & Abdul Halim, A. H. (2021). The concept of hisbah in halal enforcement compliance in Malaysia. *Jurnal Islam Dan Masyarakat Kontemporari*, 22(3), 129-140. <https://doi.org/10.37231/jimk.2021.22.3.556>
- Yang, K., Zhang, J., Zhang, C., Guan, J., Ling, S., & Shao, Z. (2025). Hierarchical design of silkworm silk for functional composites. *Chemical Society Reviews*, 54(10), 4973-5020. <https://doi.org/10.1039/d4cs00776j>
- Zhao, L., Chen, D. S., Gan, Y. J., Yuan, X. H., & Wang, Y. (2015). Analysis of length and fineness of lotus fiber extracted by physical methods. *Chemical Engineering Transactions*, 46.