

RESEARCH ARTICLE

‘Solving the *rumūz*’: Mamlūk-era sources on alchemical symbolism

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Abstract

The use of *rumūz* – symbols or ciphers – is pervasive across the Islamicate alchemical corpus. Historians have long debated how such symbols should be interpreted, with some emphasizing the spiritual or mystical idiom often employed by alchemists, and others seeking to decrypt alchemical literature for its technical or proto-scientific content. This paper proposes that one fruitful way to approach *rumūz* is to compare depictions of alchemy drawn from three distinct genres of source material: alchemical treatises, literary works and pedagogical encyclopedias. By tracing how each treats the purpose, form and interpretation of *rumūz*, I show how these differences illuminate the scholarly practices, pedagogical methods and intellectual positioning of alchemists in the Mamlūk period. More broadly, the study demonstrates the value of widening the evidentiary base beyond specialist treatises, revealing how alchemical discourse intersected with wider literary culture, reading practices and the transmission of esoteric knowledge in the later medieval Islamicate world.

The concept of *rumūz* (sing. *ramz*) is of central importance to the history of Islamicate alchemy. In its broadest sense, a *ramz* is simply a ‘symbol’ or ‘sign’. In the context of the Islamicate occult sciences, however, the term typically denotes something closer to a ‘cipher’ or ‘code’, with these codes coming in a variety of forms that ranged from secret alphabets to the use of opaque allegories and metaphors.¹ In alchemy, *rumūz* were used for a variety of reasons, as they were for other occult or esoteric pursuits. Following Noah Gardiner, I use the term ‘esoteric’ here and throughout to denote an epistemic framework emphasizing the inner or hidden meanings of the written word (particularly scripture), and the spiritual hierarchy and secretive practices associated with the divination of this hidden meaning.² The occult sciences, which I take to include alchemy, can be described as pursuits which aim to understand and use the hidden properties of physical phenomena.³ While there is some overlap in the practices and accompanying metaphysics across both domains, it is important not to conflate the occult and the esoteric entirely in order to better understand the precise nature of this overlap.

¹ Sébastien Moureau and Godefroid de Callatay, ‘In code we trust: the concept of *rumūz* in Andalusī alchemical literature and related texts’, *Asiatische Studien* (2021) 75(2), pp. 429–47, 430.

² Noah Gardiner, ‘Esotericist reading communities and the early circulation of the Sufi occultist Aḥmad Al-Būnī’s works’, *Arabica* (2017) 64(3–4), pp. 405–41, esp. 409.

³ Noah Gardiner, ‘Stars and saints: the esotericist astrology of the Sufi occultist Ahmad al-Buni’, *Magic, Ritual and Witchcraft* (2017) 12(1), pp. 39–65, 46.

Alchemists, and writers discussing alchemy, often expressed the broad belief that alchemical knowledge should be concealed from the incapable or unworthy. Some, like Abū Naṣr al-Fārābī (d. AD 950–1/AH 339), gave more specific rationales for secrecy, his reasoning being grounded in fears that precious metals would depreciate and consequently lead to social upheaval.⁴ Using *rumūz* to encode alchemical writings played a crucial role in these processes of concealment. However, such enshrouding in *rumūz* has resulted in vast disagreements amongst modern scholars as to what much of the extant alchemical literature is actually talking about. As a result, three key historiographic trends have emerged regarding the interpretation of the alchemical corpus (Islamicate and otherwise): the technical/scientific reading, the spiritual reading and the psychoanalytic reading.⁵

The technical/scientific tends to downplay or disregard those aspects of alchemical writing that cannot be readily understood as a precursor to modern – particularly experimental – chemistry.⁶ At its worst, this lapses into an unreflective presentism which fails to understand alchemical activity in its appropriate social and cultural context.⁷ However, few historians writing within this trend seek to entirely dismiss the apparently non-technical aspects of alchemy; they simply choose not to emphasize them. Despite its shortcomings, this branch of historiography has been fruitful, encouraging an appreciation of alchemy’s experimental value whilst simultaneously collapsing anachronistic distinctions between alchemy and chemistry.⁸

Similarly, most proponents of the spiritual reading do not attempt to argue away the existence of a largely technical, experimental science. There are some exceptions to this rule, such as René Guénon, who argued that ‘alchemy is taken in a material sense only by the ignorant, for whom symbolism is a dead letter, those very people whom the true alchemists of the Middle Ages stigmatised as “puffers” and “charcoal burners”’.⁹ However, exceptions notwithstanding, what is at stake in this historiographical trend is again a question of emphasis. Scholars of this bent view much of alchemical literature as a metaphor for spiritual growth and therefore focus on its more overtly spiritual aspects whilst not denying its technical dimensions.¹⁰ This is inspired not only by the frequently spiritual–mystical idiom of the alchemists, but also by the wider use of alchemical metaphors in the works of several Sūfī writers. For example Najm al-Dīn Kubrā (d. AD 1221/AH 618), the founder of the Kubrawiyya *ṭarīqa* (‘path’, the common way of referring to Sūfī orders), when discussing the soul’s striving away from the material towards the sublime, says, ‘our path is the path of alchemy’.¹¹ Other frequently commented-upon examples include al-Ghazālī’s Persian *al-Kīmīyā’yi sa’adat*, and a notable chapter of Ibn ‘Arabi’s *al-futūḥāt al-makkiyya* which bears

⁴ Salam Rassi, ‘Alchemy in an age of disclosure: the case of an Arabic Pseudo-Aristotelian treatise and its Syriac Christian “translator”’, *Asiatische Studien* (2021) 75(2), pp. 545–609, 589.

⁵ For an overview of these historiographical discussions, particularly in the context of the Latin West, see Lawrence M. Principe and William R. Newman, ‘Some problems with the historiography of alchemy’, in Anthony Grafton and William R. Newman (eds.), *Secrets of Nature: Astrology and Alchemy in Early Modern Europe*, Cambridge, MA: MIT Press, 2001, pp. 385–431.

⁶ E.g. Ahmad Y. al-Hassan, *Studies in al-Kīmya’: Critical Issues in Latin and Arabic Alchemy and Chemistry*, Hildesheim: Georg Olms Verlag, 2009, introduction.

⁷ Principe and Newman, op. cit. (5), pp. 415–17.

⁸ Principe and Newman, op. cit. (5), p. 418.

⁹ René Guénon, ‘Islamic esoterism’, in Henry F. Fohr (tr. and ed.), *Insight into Islamic Esoterism and Taoism*, Hillsdale, NY: Sophia Perennis, 2004, pp. 1–8, 7; see also Liana Saif, ‘What is Islamic esotericism?’, *Correspondences: Journal for the Study of Esotericism* (2019) 7(1), pp. 1–59, 27.

¹⁰ E.g. Pierre Lory, *Alchimie et mystique en terre d’Islam*, Lagrasse: Verdier, 1989; Henry Corbin, *L’alchimie comme art hiératique*, Paris: L’Herne, 1986.

¹¹ Toby Mayer, ‘Some salient alchemical features of the mysticism of Kubrā’s Fawā’ih al-Jamāl’, *Maghreb Review* (2020) 45(4), pp. 744–62, 744; Eyad Abuali, ‘Words clothed in light: dhikr (recollection), colour and synaesthesia in early Kubrawi Sufism’, *Iran* (2019) 58(2), pp. 279–92, 290.

the same title in Arabic.¹² This historiographic lens is not without its merits, providing a useful comparative heuristic that allows us to understand Islamicate alchemy in ways that more closely resemble its contemporary social and intellectual contexts.

The third, and least popular, approach is the Jungian, psychoanalytic reading. Theodor Abt's treatment of Ibn Umayl's *Kitāb ḥall al-rumūz* (Book on Solving the Symbols) is an illustrative example of these psychoanalytic readings.¹³ Abt suggests that alchemical writing is replete with 'psychological projections' onto the natural world of 'laws which in fact belong not to matter but to [the alchemist's] psyche'.¹⁴ The psychoanalytic reading, it should be noted, is not entirely distinct from the spiritual; Abt frames the motivating impulse behind the *Corpus Alchemicum Arabicum* project as providing 'a solid basis for an understanding of the spiritual part of alchemy', for instance.¹⁵ However, I would suggest that, at a deeper level, it is closer to the more Whiggish variants of the technical reading, at least insofar as both attempt to reinterpret the alchemical tradition in anachronistic ways that would have been alien to contemporary practitioners.

The purpose of this article is not to argue in favour of any one of these general stances when it comes to interpreting *rumūz*. Instead, it aims to establish two broad points. First, that the sources themselves showed considerable variation in their understandings of both the genesis and the purpose of *rumūz*, which are consistently portrayed as an essential part of alchemy. Second, that by studying different conceptions of *rumūz* and their place within alchemy, we stand to learn something new about the dissemination of alchemical knowledge in the Islamicate world.

Unlike other areas of Islamicate intellectual history whose scholarly practices have received vast historical attention – particularly law, theology and other religious sciences – alchemical instruction was not conducted in formal group settings, and did not leave behind the often rich documentary record that accompanied such settings, including *ijāzat al-tadrīs* (conferring the right to transmit) and *ijāzat al-samā'* or *samā'a* certificates (a record of attending the reading of a specific work).¹⁶ Indeed, in the context of these sciences, scholars warned that reading books by oneself risked dangerous misinterpretation, requiring them to seek out experienced teachers in formal group settings to avoid making mistakes.¹⁷

While alchemists also emphasized the importance of engaging an experienced sage when embarking on their studies, this was not done in formal class settings. Correspondingly, the documentary record left behind by alchemists and others in the non-religious sciences is small when contrasted with the religious sciences.¹⁸ Adding to this difficulty, there are also relatively few references to alchemists and alchemical activities in one of the most useful sources for intellectual history and the history of science in the

¹² This is Chapter 167, which has been edited and translated into French. See Ibn 'Arabī, *L'alchimie du bonheur parfait* (tr. Stéphane Ruspoli), Paris: Berg, 1981.

¹³ Ibn Umayl, *Book of the Explanation of the Symbols Kitāb Ḥall Ar-Rumūz* by Muhammad Ibn Umayl (ed. Theodor Abt), Zurich: Living Human Heritage Publications, 2003. For criticism of Abt's views on the whole and how this impacts his translation see Bink C. Hallum, 'The tome of images: an Arabic compilation of texts by Zosimos of Panopolis and a Source of the Turba Philosophorum', *Ambix* (2009) 56(1), pp. 76–88.

¹⁴ Ibn Umayl, op. cit. (13), xi.

¹⁵ Ibn Umayl, op. cit. (13), xii.

¹⁶ Andreas Görke and Konrad Hirschler (eds.), *Manuscript Notes as Documentary Sources*, Würzburg and Beirut: Ergon, 2011, introduction, pp. 1–2; Jan Just Witkam, 'The human element between text and reader: the Ijāza in Arabic manuscripts', in Claude Gilliot (ed.), *Education and Learning in the Early Islamic World*, London: Routledge, 2012, pp. 149–62.

¹⁷ Michael Chamberlain, *Knowledge and Social Practice in Medieval Damascus, 1190–1350*, Cambridge: Cambridge University Press, 1995, Chapter 4, esp. pp. 137–8.

¹⁸ Sonja Brentjes, *Teaching and Learning the Sciences in Islamicate Societies (800–1700)*, Turnhout: Brepols, 2018, pp. 69–70.

Islamicate context: the biographical dictionary.¹⁹ While the Mamlūk period saw an unprecedented proliferation of these texts which provide information on great religious scholars, poets, philosophers, astronomers, physicians and others, alchemists scarcely receive a mention at all. Thus, to study alchemy within this context, we must broaden our scope to consider a wider range of sources, and reconsider how we use these sources.

The three works under examination here are extracts from different genres. At least two of them, but most likely all three, were produced by authors who lived in Mamlūk-ruled Syria and Egypt throughout the first half of the fourteenth century. Each provides a different perspective on alchemy: one by a self-described and highly prolific alchemist, al-Jildakī (fl. c. AD 1340/AH 740); the second by a biographer, bureaucrat and man of letters, al-Şafadī (d. AD 1363/AH 764); and the third by a physician and encyclopedist, Ibn al-Akfānī (d. AD 1348/AH 749).

The first section of this article opens with a brief sketch of two interrelated, recurring themes in alchemical literature more generally: the notion of acquiring alchemical knowledge as a form of exegesis, and the importance of seeking instruction from a teacher. These themes appear explicitly in the first of the three aforementioned sources under consideration here: the introduction to a late work by al-Jildakī called *al-Miṣbāḥ fi asrār ‘ilm al-miftāḥ* (The Illuminating Lamp on the Secrets of the Keys), which I translate and analyse.

These themes appear in a more subtle form in the second work considered in this article: part of the introduction to al-Şafadī’s *al-Ghayth al-musajjam fi sharḥ lāmīyat al-‘ajam* (The Abundant Rains in Explaining the L-Poem of the Non-Arabs). The work is a literary compendium, framed as a commentary on the famous poem by renowned poet, state official and alchemist al-Ṭuḡhrā’ī (d. c. AD 1121/AH 514), and an analysis of its use of *rumūz* forms the second section of this article.²⁰ This section will demonstrate that alchemy and its *rumūz* provided a rich metaphorical idiom for discussing a variety of different themes, ranging from the moralizing to the humorous.

The third source considered in this article is taken from Ibn al-Akfānī’s famous encyclopedia of the sciences, *Irshād al-qāṣid ilā asnā al-maqāṣid*. On the whole, Ibn al-Akfānī offers a fairly prosaic account of alchemy. However, his comments on *rumūz*, when combined with what we know about exchanges with his friend and sometime pupil al-Şafadī, would suggest that he himself taught alchemy but, following what he regarded as best practice, only did so orally. An analysis of this work forms the third and final section of this article. However, rather than focusing on the work in isolation, the third section of this paper will examine its relation to the sources discussed in the preceding sections. Unlike al-Jildakī’s *al-Miṣbāḥ fi asrār ‘ilm al-miftāḥ* or the introduction to al-Şafadī’s *al-Ghayth al-musajjam fi sharḥ lāmīyat al-‘ajam*, this source does not allude to any parallels between exegesis and solving the *rumūz* and does not emphasize alchemy’s secretive nature to such a great extent, offering a different perspective on the use of *rumūz* which nevertheless still appear within the text.

Collectively, the analysis of these sources provided here demonstrates that *rumūz* and ideas about their decryption were central to accounts of alchemical pursuits. The primary methodological contention of this paper, however, is that by expanding our source base across genres, and paying attention to the different ways in which these sources used or

¹⁹ Brentjes is one of few scholars to recently recognize the value of these texts as sources in the history of science. See Sonja Brentjes, ‘Shams Al-Dīn Al-Sakhāwī on Muwaqqits, Mu’adhdhins, and the teachers of various astronomical disciplines in Mamluk cities in the fifteenth century’, in Brentjes (ed.), *The Sciences in Islamicate Societies in Context*, London: Routledge, 2024, pp. 27–47.

²⁰ Kelly Tuttle, ‘Expansion and digression: a study in Mamlūk literary commentary’ (PhD dissertation, University of Pennsylvania, 2013), esp. pp. 23–6 – Tuttle discusses the book’s genre at length; François C. De Blois, ‘al-Ṭuḡhrā’ī in Peri Bearman (ed.), *Encyclopaedia of Islam New Edition Online*, Leiden: Brill, 2012, at <https://referenceworks.brill.com/display/package/eio?contents=mrw-package-toc>.

discussed *rumūz*, we can glean valuable insights into the pursuit of alchemy, and its place within the wider intellectual landscape of the Islamicate world. One specific insight that arises is that while the perennial image of the pseudo-spiritual master-disciple relationship recurs across alchemical writings of different types, in practical terms emphasis on the (sometimes individual) study of natural-philosophic principles was at least equally important.

The master-disciple relationship and *ta'wīl* in alchemical writing

The idea that the budding alchemist must engage an experienced sage is foundational in the mythology surrounding its first arrival in the Islamicate world.²¹ These myths state that alchemy was introduced into Islam by the Umayyad prince Khālid ibn Yazīd (d. c. AD 704/AH 85), who had learned the art from Maryānus the Monk, a notable figure later known in the West by the latinized form of his name: Morienus.²² Prince Khālid ibn Yazīd, so the tales go, seeks out Maryānus from his retreat in the mountains near Jerusalem, with the latter eventually agreeing to share the divine wisdom (*ḥikma*) of alchemy with him.²³ After being assured of his sincerity and pure-heartedness, the monk teaches Khālid that alchemical knowledge is concealed by *rumūz*, lest it fall into impious hands, adding that only the wise and resourceful who have ‘fixed their faith in God’ might unravel its secrets.²⁴

Of equal importance to historical accounts of the growth of alchemical knowledge in the Islamicate world is the spiritual-alchemical, master-disciple relationship between Jābir ibn Ḥayyān and the sixth Shī‘ī Imām Ja‘far al-Ṣādiq.²⁵ Ja‘far appears across the Jabirian corpus as a source of spiritual inspiration, alchemical instruction and, on at least one occasion, censure, notably against Jābir’s indiscretion in disclosing too widely his alchemical learning.²⁶ In his writings, Jābir tells us that through Ja‘far, God helped ease his own path to alchemical knowledge, ‘unveiling’ its hitherto obscure contents to him.²⁷ While the historicity of these relationships and the attribution of specific works to both Jābir and Khālid is contested, they are nonetheless at least popular myths which highlight the symbolic importance of the master-disciple relationship in alchemical contexts.²⁸

In both stories, the spiritual or religious dimension to these master-disciple relationships is unmistakable. In the case of Jābir, the religious dimensions of his purported

²¹ For some variants see Lawrence Principe, *The Secrets of Alchemy*, Chicago: University of Chicago Press, 2013, pp. 20–2.

²² Marion Dapsens, ‘De la Risālat Maryānus au De compositione alchemiae: Quelques réflexions sur la tradition d’un traité d’alchimie’, *Studia Graeco-Arabica* (2016) 6, pp. 121–40; Dapsens, ‘The alchemical work of Khālid b. Yazīd b. Mu‘āwiya (d. c.85/704)’, *Asiatische Studien* (2021) 75(2), pp. 327–427; For a survey of Arabic biographical, historical and alchemical sources mentioning this relationship see Manfred Ullmann, ‘Hālid ibn Yazīd und die Alchemie: Eine Legende’, *Der Islam* (1978) 55(2), pp. 185–93; Ullmann, ‘Khālid b. Yazīd b. Mu‘āwiya’, in Bearman, op. cit. (20).

²³ Ahmad Y. al-Hassan, ‘The Arabic original of *Liber de Compositione Alchemiae* the Epistle of Maryanus, the hermit and philosopher, to Prince Khalid bin Yazid’, *Arabic Sciences and Philosophy* (2004) 14(2), pp. 213–31, 227.

²⁴ Al-Hassan, op. cit. (23), pp. 228–30.

²⁵ Regula Forster, ‘Jābir b. Ḥayyān’, in Kate Fleet, Gudrun Krämer, Denis Matringe, John Nawas and Devin J. Stewart (eds.), *Encyclopaedia of Islam Three Online*, Leiden: Brill, 2018, at <https://referenceworks.brill.com/display/package/eio?contents=mrw-package-toc>.

²⁶ Syed Nomanul Haq, *Names, Natures, and Things: The Alchemist Jābir Ibn Ḥayyān and His Kitāb al-Aḥjār (Book of Stones)*, Dordrecht: Kluwer Academic, 1994, p. 6, esp. n. 40.

²⁷ *Kitāb al-Thalāthin Kalima*, in Jābir ibn Ḥayyān, *L’élaboration de l’élixir suprême: quatorze traités de Ḡābir ibn Ḥayyān sur le grand œuvre alchimique* (ed. Pierre Lory), Damascus: Institut français de Damas, 1988, p. 40: *yusahhīlu ‘alayya dhālika wa-yakshifu li al-amr*.

²⁸ Haq, op. cit. (26), esp. pp. 14–21. Langermann cautions Haq against too hastily dispensing with Kraus’s conclusions, which he points out were based on a study ranging across most of the known corpus of his time. Y. Tzvi Langermann, ‘Review of *Names, Natures, and Things: The Alchemist Jābir ibn Ḥayyān and His Kitāb al-Aḥjār (Book of Stones)*, by Syed Nomanul Haq’, *Journal of the American Oriental Society* (1996) 116(4), p. 793.

relation to sixth Shīʿī Imām Jaʿfar al-Ṣādiq has been the subject of much scholarly interest, but there is one particular aspect of this religious dimension I want to highlight as it also features prominently in al-Jildaki’s work: the idea of *taʿwīl*. In its most superficial sense, *taʿwīl* is another word for the interpretation of the Qurʾān. However, the word bears the more subtle connotation of returning something to its original source (from the root *a-w-l*) and can also suggest something like divination (e.g. from a dream).²⁹ The term has consequently come to be associated with the more esoteric readings of the Qurʾān, being a means of finding its inner or concealed (*bāṭin*) meaning. However, it is often contrasted with *tafsīr*, a term which typically denotes expounding or explaining something in Qurʾānic exegesis and is the word used most commonly to denote exegesis itself.³⁰

Many Sūfī and Shīʿī traditions teach that only those who have reached a certain spiritual and scholarly station can access deeper layers of meaning in the Qurʾān. In Sūfī thought, spiritual attainment can lead to the unveiling (*kashf*) of barriers to understanding the Qurʾān’s inner meanings, typically with the help of a divinely inspired *walī*.³¹ In much of Shīʿī Islam, meanwhile, the *imām* similarly serves as an exegetical and spiritual authority, guiding the seeker toward deeper insight into revelation.³²

Taʿwīl appears frequently in the writings of alchemists. Jābir, for example, uses the term when talking about the teachings of past sages.³³ However, it was most typically used to imply a parallel between the process of unveiling encrypted alchemical wisdom and this deeper exegesis of the Qurʾān. For example, in the purported exchanges of Khālid and Maryānus, the latter says that the budding alchemist must hope for ‘beautiful preparations, correct *taʿwīl*, and the best of compositions, without any deviance [*zaygh*]’.³⁴ This is an unmistakable allusion to the famous seventh verse of the third chapter of the Qurʾān, Āl ʿImrān. The verse (sometimes called the *taʿwīl* verse) is the subject of great exegetical controversy, as on some readings it seems to suggest that a special class of people (‘those most firm in knowledge’) have privileged access to the true meaning behind the Qurʾān’s less straightforward verses, while others argue that their true meaning is known only by God. The verse goes on to warn that ‘those with deviance [*zaygh*] in their hearts’ would seek to cause strife by searching after the *taʿwīl* of these ambiguous verses.³⁵

While there are several parallels between spiritual and alchemical matters such as the emphasis on divine gifts, faith and pure intention as important preconditions, and the sense of spiritual hierarchy this necessarily entailed, it is important to note that this does not imply that the alchemists were themselves talking about a spiritual process. Al-Ṭuḡhrāʿī, for example, uses *taʿwīl* to refer to the failed attempts of former alchemists to interpret alchemical *rumūz*, which, he makes clear, are to be understood as technical terms, with each

²⁹ Ismail Poonawala, ‘*Taʿwīl*’ in Bearman, op. cit. (20); see also Edward William Lane, *An Arabic-English Lexicon*, 8 vols., London: Williams and Norgate, 1863–1893, p. 126, available at www.lanelexicon.com (accessed 5 May 2025).

³⁰ Saif, op. cit. (9), pp. 17–18.

³¹ Alexander Knysh, *Sufism: A New History of Islamic Mysticism*, Princeton, NJ: Princeton University Press, 2017, pp. 141–2, 145, 155; Michel Chodkiewicz, *Seal of the Saints: Prophethood and Sainthood in the Doctrine of Ibn ʿArabī* (tr. Liadain Sherrard), Cambridge: Islamic Texts Society, 1993, pp. 21–5.

³² Mohammad Ali Amir-Moezzi, *The Divine Guide in Early Shiʿism: The Sources of Esotericism in Islam* (tr. David Streight), Albany: State University of New York Press, 1994, esp. pp. 6–19.

³³ *Kitāb al-Īdāh*, in Jābir ibn Ḥayyān, *The Arabic Works of Jābir ibn Ḥayyān* (ed. Eric J. Holmyard), Paris: Geuthner, 1928, p. 55.

³⁴ Al-Hassan, op. cit. (23), pp. 228–9.

³⁵ Mahmoud Ayoub, ‘The speaking Qurʾān and the silent Qurʾān: a study of Imāmī Shīʿī tafsīr’, in Andrew Rippin (ed.), *Approaches to the History of the Interpretation of the Qurʾān*, New York: Oxford University Press, 1988, pp. 177–98, 186–7; William C. Chittick, *The Sufi Path of Knowledge: Ibn al-Arabi’s Metaphysics of Imagination*, Albany: State University of New York Press, 1989, pp. 200–2; Nicholas Boyleston, ‘Qurʾanic exegesis at the confluence of Twelver Shiism and Sufism: Sayyid Ḥaydar Āmulī’s al-Muḥīṭ al-aʿẓam’, *Journal of Qurʾanic Studies* (2021) 23(1), pp. 1–35, 14–17.

corresponding to a single, precise meaning.³⁶ In addition, he is careful to emphasize that apparently religious terms found in alchemical texts should not be understood as religious terms, but simply as technical terms.³⁷ Al-Ṭuḡhrā'ī's advice on what this meant on a practical level, however, is contradictory; he boasts in one poem of succeeding in unravelling the *rumūz* by himself, 'without a master or guide' (*bighayri ustādh wa-lā murshid*), but elsewhere argues that only those who had studied under the sages of alchemy would be able to decode its *rumūz*.³⁸

With these themes in mind, let us turn to al-Jildakī. As stated above, the archival record suggests that he was the most prolific alchemist of his age. Despite this, essential facts about his life remain shrouded in mystery. Nicholas Harris has carried out the most recent, and by far the most rigorous, attempt to locate al-Jildakī in his historical context, arguing that he likely lived during the fourteenth century, and was an 'Egyptian-born descendant of the (largely) Turkic Mamlūk class'.³⁹ This would make him very similar to al-Ṣafadī, yet there is no indication that the two knew each other at all. Indeed, as Harris notes, it was generally uncommon for alchemists to receive mention in the biographical and historical accounts of their contemporaries.⁴⁰

Harris places the *Miṣbāḥ* among the later works of al-Jildakī. As with most of al-Jildakī's texts, there are several extant witnesses across Europe, Istanbul, Cairo and elsewhere. In addition to the thirteen identified in Ullmann's survey of 1972, there are at least two others held in Istanbul. For the following translation, I have largely relied on a copy of *Miṣbāḥ* held at the Bibliothèque nationale de France (BNF) that dates to AH 973 (AD 1566): MS Arabe 2615.⁴¹ The manuscript bears no obvious signs of use or marginalia and does not appear to have been produced by an especially gifted or careful penman; vocalization marks and glottal stops are absent from the text (not altogether uncommon for manuscripts at the time), while dots above and below letters are used inconsistently. The scribe's name is partially obscured but the legible portion of it suggests he was called Yāḥyā al-Ḥamwī, suggesting that the scribe came from the central Syrian city of Hama. The patrimonial middle name remains unclear.⁴²

Though the scribe's place of origin can be assumed from their name, the origin of the manuscript itself is unknown. Detailed knowledge of its provenance is not available but, like many of the Arabic collections at the BNF, it was formerly part of the collection of the French bibliophile and statesman Jean-Baptiste Colbert (d. AD 1683).⁴³ Colbert's collection was vast, containing over 1,600 Arabic manuscripts as well as numerous others in Persian, Turkish and other languages.⁴⁴ Colbert sponsored many manuscript-collecting trips, and Istanbul, Aleppo, Cairo and Isfahan were all popular destinations for such trips in the seventeenth

³⁶ Al-Ḥusayn ibn 'Alī al-Ṭuḡhrā'ī, *Ḥaqa'iq al-istishhād: Risālah fī ithbāt al-kīmiyā' wa-al-radd 'alā Ibn Sīnā* (ed. Faraj Razzouq), Baghdad: Wizārat al-Thaqāfah wa-al-ʿIlām, 1982, p. 25.

³⁷ Al-Ṭuḡhrā'ī, op. cit. (36), p. 52.

³⁸ Al-Ṭuḡhrā'ī, op. cit. (36), pp. 26, 52.

³⁹ Nicholas G. Harris, 'In search of 'Izz Al-Dīn Aydamir al-Ġildakī, Mamlūk Alchemist', *Arabica* (2017) 64(3–4), pp. 531–56, 550,–6; Eric J. Holmyard, 'Aidamir Al-Jildakī', *Iraq* (1937) 4, pp. 47–53; Manfred, Ullmann, *Die Natur- und Geheimwissenschaften im Islam*, Leiden: Brill, 1972, p. 240.

⁴⁰ Harris, op. cit. (39), pp. 555–6.

⁴¹ Georges Vajda, *Notices des manuscrits arabes 2400 à 2759*, p. 43 (p. 555 digital), Paris: Bibliothèque nationale de France (BNF), 1940, at <https://gallica.bnf.fr/ark:/12148/btv1b84701114/f555.item> (accessed 5 May 2025). This is the entry for BNF MS 2615.

⁴² BNF MS Arabe 2615, 145v.

⁴³ Vajda, op. cit. (41), p. 43.

⁴⁴ Julie Garel-Grislin, 'Les manuscrits arabes et persans du cardinal Mazarin conservés à la Bibliothèque nationale de France' (diplome de conservateur des bibliothèques dissertation, Ecole nationale supérieure des sciences de l'information et des bibliothèques, 2013), pp. 9–11.

century.⁴⁵ Given the scribe's origin and the date of the manuscript – around fifty years into Ottoman rule over Syria and Egypt – it is probable that the manuscript was produced in one of the first three of these locations.

Of the versions of the *Misbāḥ* I have seen, the BNF's copy is the oldest one with the introduction intact.⁴⁶ There are several minor differences between the copies, ranging from scribal errors to potentially more deliberate choices to excise certain phrases, but on the whole there is relatively little significant variation. A more systematic study and comparison may hold valuable insights into variations in alchemical culture across different locales, as would a study of those manuscripts that bear more obvious signs of use, but this falls beyond the scope of the present study. For now, let us turn to the text as presented in MS Arabe 2615:

And so now, God has revealed to his messenger in the Well-Guarded Revelation [*al-dhikr al-maknūn*] the Almighty and Majestic's words: 'It is God who subjected the sea for you – ships sail on it by His command so that you can seek His bounty and give Him thanks – He has subjected all that is in the heavens and the earth for your benefit, as a gift from Him. There truly are signs in this for those who reflect.' [45:12–13].⁴⁷

And so it became apparent through the *ta'wīl* of these revelations, the honour of those thus addressed, the human species – by virtue of His saying 'for you'. And though in its meaning is the sense of absoluteness, it does not imply a [complete] generalization. For the secret of human vicegerency [*khilāfa*] lies in its initial specification, first unto Adam, the father of humanity, peace be upon him, and after him to those of perfection [*dhawī al-kamāl*], as accords with their ranks.

Let us return to elucidating the deeper meaning of *taskhīr* [designation] through *ta'wīl* to the student enquiring into it [through the framework of] generalization, specification and rectification.

And I say that his saying, be He exalted, God is He who designated to you the sea, he has defined it with the definite article [*al*]. So this suggests that the intended is the Greater Encompassing Ocean, which surrounds the terrestrial world, and from which extends all seas of this world [*dunyā*], and its waters and rivers.

If you were to pose: all the seas of this world and its flowing springs in the lands, if they connect one to the other, then they would extend the Greater Sea because they all pour into it. And so I say, in response, and God knows best, that its expanse in the first place is within it, and from it, it began, and unto it, it returns.

This is because God, be He exalted, made first the world of water before the world of the earth, and we have shown the verification of this in our book named *al-Burhān fī asrār 'ilm al-mīzān* [The Proof in the Secrets of the Science of Balances] when we recalled the balance of the world of water and its levels.

As for the saying of the Exalted that 'ships sail on it by His command', it is indicated by *ta'wīl* to mean that this could be generalized over all that can be properly called the 'sea', and anything that may sail upon it by His command. This is because the origin is one, and the branches come from it.

And the Great Qur'ān is extremely concise and eloquent, while the principles of *ta'wīl* include chapters and branches for clarification and proof. As for the discourse on the investigation of the ships, its movements and types, and what relates to it from the sciences and divine inspiration, it is extensive and the writing on it vast.

⁴⁵ Garel-Grislin, op. cit. (44), p. 40.

⁴⁶ There are six I have seen, two each in Paris (BNF MSS Arabe 2615, 2616), Istanbul (Suleymaniye Library Carullah 227900, 227901) and Dublin (Chester Beatty Library (CBL) MSS 4553, 4995).

⁴⁷ *The Qur'an* (tr. Muhammad A.S. Abdel Haleem), Oxford: Oxford University Press, 2016, p. 499.

And now the saying of the Exalted ‘so that you can seek His bounty and give Him thanks’. And to seek [*ibtighāʾ*] is the search in seriousness, effortful deliberation and, pureness of intention, to receive guidance from His grace, and the expanse of His bounty, as there is no sustenance, nor subsistence, and no station for humanity, nor any other animal, but that which extends from the clear bounty of God’s grace, and his goodness, generosity, and plenitude.

And we can divide the seeking after fortune into two, by way of their causes, and ultimately God gives fortune unto whom He desires without any comeuppance. The first is that which relates to the lawful and permissible fortunes whose causes are free from evil. The second division is that which relates to the unlawful fortune, may God protect us from this.

Regarding the permissible fortune, the greatest among the disciplines is that which consists in the work of the right hand and the sweat of the brow, particularly when coupled with sound advice [*naṣīḥa*]. As by the word of [the Prophet] Peace Be Upon Him ‘in each craft, take sound advice from the best of its people’, and to his saying ‘the religion is in sound advice’, and ‘he who cheats is not of us’. And there is no doubt that the best of the crafts and the highest in value, is the Divine Craft [alchemy], which consists in power, making manifest, giving aid, victory, and manifest conquest, with the permission of God the Lord of the worlds.

But in that the human is by nature sinful, it is necessary that we make manifest all the crafts wherein lie cooperation and civilization.

As for the noble Divine Craft, it must be hidden, and it is not permitted to make it apparent but to those who deserve it. For in its disclosure is corruption, by which cooperation is abandoned, as well as all the means by which we are united. Because the human, if he achieves the Highest Craft, leaves the rest, for its superior powers and benefits.

And because of needing both to hide this craft, but also to transmit it to those who deserve it, it became necessary for the sages to render it in *rumūz*, metaphors, and an excess of names and titles. And so as not for any but the worthy to find it they place it in an idiom that is only understood by those who have mastered the sciences, trained in philosophy, and cleaved to those sages who have navigated the world of the Craft.

And God, be He exalted, granted them this gift and so they built a City of Wisdom. They deposited in it all the philosophical sciences, storing them as treasures and reserves, and they covered it with barriers and set up around its perimeter impregnable walls of images, with towers, ramparts, catapults and cannons. They placed strong protections at its gates from every obstacle, and guards so that none may open its gates but those who have studied the High Noble Wisdom, and arrived in the end to the lofty stations of this Prophetic [*sunniyya*] path. And so for him the talismans will dissolve, the gates are opened, the obstructions will fall away, and the veil will be lifted.

And the sage will become a master in the world of the Craft, by God’s permission, the Most Generous and the Bestower. Their abilities therein are according to their ranks and stations, in knowledge, action, and insight. He whom God has ruled will be granted this arrival, and will arrive at true outcomes, obtain authentic results, and partake of its sweet and ripe fruits.⁴⁸

This text raises several interesting questions, but for the moment I would emphasize three key points. First, this introduction is further evidence of the centrality of *rumūz* in alchemical writing. Second, al-Jildakī is doing more than simply drawing parallels between *taʾwīl*

⁴⁸ BNF MS 2615 1v–3r.

and alchemical knowledge here. He does not, in fact, explicitly draw such parallels at all, although they can perhaps be inferred, particularly from his mention of ‘ranks’, another notion borrowed from Islam’s spiritual lexicon. In his first discussion of ranks, the term refers to the ranks of prophets like Adam seeking divine bounty generally, while his second use of the word refers instead to the pursuit of alchemical knowledge specifically. The latter choice would suggest that al-Jildakī is trying to draw some analogy between the notion of spiritual attainment and alchemical attainment, the former heightening one’s exegetical capabilities, and the latter their ability to decipher alchemical code. But *taʿwīl* also figures in a more explicit way: al-Jildakī explicitly performs *taʿwīl* of Scripture to motivate alchemical pursuits, taking the verses above as confirmation that humankind should fulfil the divine injunction to seek God’s bounty by pursuing alchemy. Like his contemporaries, al-Jildakī warns that not everyone should do so, but it nevertheless remains a possibility.

Third, when instructing students of alchemy in how to pursue the craft, al-Jildakī does not simply tell them to seek the advice of sages, though this is an important part of the process. Instead, he also emphasizes the need for hard work and the seemingly individual study of alchemical and natural-philosophic precepts, a matter explored in subsequent passages of the *Misbāḥ*. These are themes I will return to in the final section of this paper. For the moment, let us note that for al-Jildakī the pursuit of alchemical knowledge, portrayed in ostensibly spiritual terms, also emphasizes scholarly training, with both of these preferably being coupled with the advice of an accomplished sage.

Rumūz al-kīmīyā’ in al-Ṣafadī

Al-Ṣafadī is probably best known today for compiling the largest extant Mamlūk biographical dictionary.⁴⁹ However, as exemplified in the *Sharḥ*, his scholarly interests ranged far beyond biography.⁵⁰ This work is framed as a commentary on a poem but is, in reality, perhaps best described as a literary compendium or an encyclopedia. The work was subject to censure and led to an accompanying countercommentary by one of his contemporaries, al-Damāmīnī (d. AD 1424/AH 827).⁵¹ The poem which provides the foil for al-Ṣafadī’s far-ranging discussions was composed by al-Ṭuḡhrā’ī, an alchemist and slain heretic. However, the poem itself is not one of his more explicitly alchemical writings.⁵²

The account of alchemy given in al-Ṣafadī’s *Sharḥ* is arguably one of the most important texts in the formation of the later Islamicate alchemical canon, although it is rarely acknowledged as such. Large portions of the text were, for example, quoted verbatim in the *Kashf al-zunūn ‘an asāmī al-kutub wa-al-funūn* (Unveiling the Doubts on the Names of Books and Arts) by eminent Ottoman encyclopedist Ḥājī Khalīfa (d. AD 1657/AH 1068).⁵³ Texts

⁴⁹ Robert Irwin, ‘Mamluk history and historians’, in David S. Richards and Roger Allen (eds.), *Arabic Literature in the Post-classical Period*, Cambridge: Cambridge University Press, 2006, pp. 159–70, 162.

⁵⁰ I discuss this text in a forthcoming article, ‘Al-Ṣafadī’s veiled criticism of Ibn Taymiyya: esotericism, language, and reason in *al-Ghayth al-Musajjam fī Sharḥ Lāmiyat al-‘Ajām*’, in the *Journal of the Royal Asiatic Society*, where I also examine its wider exegetical and heresiological significance.

⁵¹ For a detailed analysis of his critics see Adam Talib, ‘Al-Ṣafadī, his critics, and the drag of philological time’, *Philological Encounters* (2019) 4(1–2), pp. 109–34.

⁵² François C. De Blois, ‘Zindīq’, in Bearman, op. cit. (20); Khalīl ibn Ayybak al-Ṣafadī, *al-Ghayth al-musajjam fī Sharḥ Lāmiyat al-‘Ajām*, 2 vols., Beirut: Dār al-Kutub al-‘Ilmiyah, 1975, vol. 1, p. 19; Al-Ṭuḡhrā’ī was executed after being declared a *zindīq* (often translated as ‘heretic’, but sometimes with the more narrow, original meaning of Manichaean or one attempting to subvert Islam by introducing external precepts to it), although as al-Ṣafadī himself affirms, this was likely politically motivated.

⁵³ Ḥājī Khalīfa/Kātip Çelebi, *Kashf al-zunūn ‘an asāmī al-kutub wa-al-funūn* (ed. Ekmeleddin İhsanoğlu and Bashshār ‘Awwād Ma’rūf), 8 vols., London: Mu’assasat al-Furqān l-il-Turāth al-Islāmī, 2021, vol. 6, pp. 131–6 (accessed through Shamela.ws).

such as this have become increasingly important in the history of science and intellectual history, as scholars seek to understand shifting conceptions of the sciences – religious, mathematical and otherwise – in the Islamic world.⁵⁴ Incidentally, another important source of alchemical knowledge for Ḥājji Khalīfa was the aforementioned al-Jildakī, who, despite apparent obscurity during his lifetime, was clearly recognized as an important source by Ottoman scholars.⁵⁵

While its influence on later scholars is reason enough to study the source, the primary reason for its inclusion in this paper is its relation to different contemporary sources. Although al-Jildakī's writing on the pursuit of alchemy is valuable as it is, as noted above, it provides us with only the perspective of a self-declared, practising alchemist. However, knowledge of – and interest in – alchemy stretched far beyond the ranks of those with his dedication to the craft. Al-Ṣafadī's broader approach therefore offers us an insight into alchemy and its place in the imagination of the literary scholar and *adīb* (or *litterateur*), as well as reflecting his own relationship with the discipline.

Al-Ṣafadī first mentions alchemy in his biographical preface on al-Ṭughrā'ī, wherein he cites the praise of the historian 'Imād al-Kātib (d. AD 1201/AH 597) for al-Ṭughrā'ī. According to 'Imād al-Kātib, al-Ṭughrā'ī not only possessed literary and poetic gifts but also 'unveiled the encrypted [*marmūz*] secret of alchemy'.⁵⁶ A fuller discussion of alchemy does not come until a few passages on, however, after al-Ṣafadī concludes his biographical discussion with a story he says was told to him by Ibn al-Akfānī. As this tale recounts, while in exile from Baghdad, al-Ṭughrā'ī was ambushed by a team of archers. One of the archers hid behind a tree, from where he ordered al-Ṭughrā'ī to utter his last words. In response, al-Ṭughrā'ī recited the following poem, impressing the archers enough to spare his life:

And so say I, to he who aims his arrow,
At me, as the edges of death close in,
And death, narrowing his bright black eyes at me,
And my heart, without him [the beloved], being ripped asunder
By God, seek my heart! Will you find
Within, room for anything but desiring the beloved?
It would be easier, but for in its folds
Lies the promise of the beloved, and their parting secret.⁵⁷

It is possible that this 'parting secret' is a reference to alchemy, especially given that the motif of 'elixir as beloved' is one which appears repeatedly throughout the history of Islamic alchemy. Ibn Umayl, for example, dedicates his *Kitāb ḥall al-humūz* to those who 'ponder how to reach their beloved, and who is not overcome either by impatience or bitterness'.⁵⁸

Regardless of the meaning of this specific reference, it serves as a preface to al-Ṣafadī's discussion of alchemy which begins shortly thereafter. He begins by telling us that al-Ṭughrā'ī had composed many works aimed at 'solving the *rumūz* of alchemy'.⁵⁹ Al-Ṣafadī's

⁵⁴ Godefroid De Callatay, 'Dividing science by ten', *Studia Islamica* (2020) 115(1), pp. 1–32; de Callatay, 'Classification of the sciences in Islamic cultures', in Birger Hjörland and Claudio Gnoli (eds.), *Encyclopaedia of Knowledge Classification* (ISKO, 2024); Sonja Brentjes, 'Encyclopaedias and classifications of the science', in Brentjes, *Teaching and Learning the Sciences in Islamic Societies (800–1700)*, Turnhout: Brepols Publishers, 2018, pp. 187–221; Talib, op. cit. (51), p. 10; Talib also refers to the notion of 'canon making' in the context of the *Sharḥ*.

⁵⁵ Ḥājji Khalīfa, op. cit. (53), pp. 136–41.

⁵⁶ Al-Ṣafadī, op. cit. (52), vol. 1, p. 18.

⁵⁷ Al-Ṣafadī, op. cit. (52), vol. 1, p. 19.

⁵⁸ Ibn Umayl, op. cit. (13), 5.

⁵⁹ Al-Ṣafadī, op. cit. (52), vol. 1, p. 20.

cites some of these, including *Jāmi' al-asrār* (The Compendium of Secrets) and *Haqāi'q al-istishhādāt* (The Truths of Borne Witnesses, normally seen as *Haqāi'q al-istishhād*).⁶⁰ The latter, as al-Ṣafadī notes, is a short treatise in which the alchemist responds to Ibn Sīnā's refutation of transmutation in his *Kitāb al-Shifā'* (Book of Healing).⁶¹ He also refers to an alchemical poetry collection, likely *Maqāṭī' al-ṣun'a*, from which he quotes an eight-verse poem centred on the discovery of the 'secrets of all existence' (*asrār al-khalīqati kulli-hā*), and processes of 'inheriting from Hermes the secret of his wisdom'.⁶²

Next, al-Ṣafadī provides us with a brief origin story for alchemy: 'it is said that the *jabābira* [giants] of Hūd were the first to practise alchemy, and that they built a city of gold and silver unlike any built before in the land.'⁶³ This is not a common account of alchemy's first practitioners, mentioning as it does the Qur'ānic prophet Hūd, a descendant of Noah sent to preach to the people of 'Ād who were ultimately punished for their arrogance and idolatry. Al-Ṣafadī does not provide a source for this tale, making its origins difficult to trace. He similarly cites no authority when he subsequently provides two etymologies of the word *al-kīmīyā'* – the first being a Hebrew phrase meaning 'from God', and the second – which he notes is more likely – deriving from the Persian for 'when will it come'.⁶⁴

Al-Ṣafadī follows this introduction with a rich survey of different opinions regarding the possibility of alchemy, here meaning transmutation. He cites a vast range of opinions from several notable figures, including the famous textualist and anti-Hellenic religious scholar Ibn Taymiyya (d. AD 1328/AH 728), who denies the art and apparently elicited the response of one Najm al-Dīn Ibn Abī al-Durr al-Baghdādī (fl. fourteenth century AD/eighth century AH); and the philosophers Fakhr al-Dīn al-Rāzī (d. AD 1209/AH 606), al-Fārābī and al-Kindī (d. AD 873 /AH 256), the latter of whom denied the art and received a pithy response from the alchemist and physician Abu Bakr al-Rāzī (d. AD 925/AH 313).⁶⁵ The arguments presented by al-Ṣafadī, too involved to meaningfully broach here, address the accidental and essential qualities of metals. He, for example, questions whether the accidental, external or incidental qualities of metals might be changed if they are assumed to share the same essential qualities. He then proceeds to introduce some of the basic precepts of the sulphur-mercury theory, including a summary of conditions necessary for transmutation drawn from Ibn al-Akfānī, and professors of natural philosophy (or science, *'ilm al-ṭabī'ī*).⁶⁶

Al-Ṣafadī concludes that possible though transmutation might be, the conditions seem exceedingly rare, and very few appear to have been successful in producing gold. He quotes

⁶⁰ Al-Ṭughrā'ī, op. cit. (36), pp. 17–24. This provides a summary of these and other works.

⁶¹ Al-Ṣafadī, op. cit. (52), vol. 1, p. 20; see also al-Ṭughrā'ī, op. cit. (36), p. 22.

⁶² Al-Ṣafadī, op. cit. (52), vol. 1, p. 20.

⁶³ Al-Ṣafadī, op. cit. (52), vol. 1, p. 20.

⁶⁴ Al-Ṣafadī, op. cit. (52), vol. 1, p. 20.

⁶⁵ It is not clear which Ibn Abī al-Durr is meant here, but the closest match seems to be mentioned in Khalīl ibn Aybak Al-Ṣafadī, *Kitāb al-wāfi bi-al-wafayāt* (ed. Aḥmad Arnā'ūt and Farḥān Muṣṭafā Turki), 29 vols., Beirut: Dār Iḥyā' al-Turāth al-'Arabī, 2000, vol. 15, p. 51 (accessed through Shamela.ws). There does not appear to be any extant record of Al-Kindī's attack, nor of the response, but the exchange is cited in Ibn al-Nadīm's (d. c. AD 995/AH 385) *Fihrist* at the earliest, though containing no details. One recent scholar notes that the earliest account of the contents of this debate known to him was Ḥājji Khalifa's, which as already noted borrowed heavily from al-Ṣafadī's much earlier account. That said, Ḥājji Khalifa provides a much more detailed account than al-Ṣafadī. It is likely, then, that they both had access to the same source, or that a later alchemist provided Ḥājji Khalifa with further detail. See Takatomo Inoue, 'Al-Kindī's attack on alchemy and his perfume making', *Oriente* (2017), 52 pp. 79–92. For the argument of al-Fārābī see Paula Carusi, 'Fakhr al-Dīn: Un teologo e l'alchimia', *Memorie di Scienze Fisiche e Naturali* (2015) 39(2/2), pp. 25–35; and the original Fakhr al-Dīn al-Rāzī, *al-Mabāḥith al-mashriqiyya fī 'ilm al-ilāhiyyāt wa-l-ṭabī'īyyāt* (ed. Muḥammad al-Mu'taṣim bi-Llāh al-Baghdādī), 2 vols., Beirut: Dār al-Kitāb al-'Arabī, 1410/1990, vol. 1, pp. 223–6; For a summary of al-Fārābī's argument see Alexandre M. Roberts, 'Thinking about chemistry in Byzantium and the Islamic world', *Journal of the History of Ideas* (2023) 84(4), pp. 599–602.

⁶⁶ Al-Ṣafadī, op. cit. (52), vol. 1, p. 22.

the renowned poet Abu ‘Alā’ al-Ma‘arrī (d. AD 1057/AH 449) to drive home his point: ‘O she whose abode is upon the rugged mountain slope, so near is her shrine, and yet beneath it are such horrors.’⁶⁷ Al-Ṣafadī considers accounts to the contrary from ‘someone who spent his life in search’ of alchemy. This individual tells him, for example, of al-Ṭuḡhrā’ī’s success in producing gold using the elixir, as well as tales of Maryānus and Māriyā al-Qibṭiyya (latinized as Maria Hebraea), whom they claim produced up to 60,000 pieces of gold from a single *mithqāl* of elixir, with Māriyā apparently boasting that she could have filled ‘all between the two peaks [*al-Khāfiqayn*]’ with gold, had it not been against God’s will.⁶⁸ However, al-Ṣafadī scoffs at this, quoting another verse: ‘Like the substance of alchemy, never has there been seen, a single person who has grasped it, though all are in its pursuit.’⁶⁹

He also goes on to quote another verse by al-Ṭuḡhrā’ī himself, which al-Ṣafadī cites as evidence that he had never succeeded in producing gold, despite the claims of his anonymous source: ‘But for the unjust rulers I would have become, one whose pebbles had ripened to pearls and sapphires.’⁷⁰ Al-Ṣafadī contrasts this with some verses by the noted alchemist and poet Ibn Arfa‘ Ra’s (fl. twelfth century AD/sixth century AH), whose famous *Shudhūr al-Dhahab* was the subject of a detailed commentary by al-Jildakī.⁷¹ Al-Ṣafadī points out that even this master of the discipline says that the best an alchemical practitioner could hope to produce was in the ratio of one to a thousand.

Al-Ṣafadī from this point onward begins to adopt a more critical tone. He tells us of a conversation he had with an unnamed enthusiast of alchemy, wherein he confronted him with three verses saying that those philosophers who tried to make gold from anything that wasn’t already gold had ‘wasted their lives in toil and exhaustion’.⁷² To al-Ṣafadī’s annoyance, his interlocutor responded by saying that the poet was right as they simply said what all alchemists already knew: that they were not creating gold, but simply transforming what was already gold *in potentia* into gold *in re*. This response references a central facet of alchemical theory: the notion of *kumūn* (latency), which means that all metals already have the potential to become gold.⁷³ However, al-Ṣafadī did not seem to accept this as a valid interpretation of the poem, critically describing it as a form of *ta’wīl*, which, according to his usage here, implies obfuscating the clear meaning of something with a far less likely interpretation.⁷⁴

Here, al-Ṣafadī takes an interesting turn. He interrupts his discussion of alchemy with a story about a dispute between Ibn Taymiyya and an unspecified follower of the Ṣūfi master Ibn ‘Arabī (d. AD 1240/AH 638). According to the tale, the follower defends Ibn ‘Arabī’s teaching by contrasting his methods with *ta’wīl*. Ibn Taymiyya responds with something said by Ibn ‘Arabī wherein he seems to blasphemously liken himself to the prophets. The interlocutor defends Ibn ‘Arabī, stating that he appears to be simply pointing out that he was like the prophets in that he cared about saving people from disbelief. Ibn Taymiyya

⁶⁷ Al-Ṣafadī, op. cit. (52), vol. 1, p. 22.

⁶⁸ Raphael Patai, *The Jewish Alchemists: A History and Source Book*, Princeton, NJ: Princeton University Press, 1994, pp. 60–80; Eric J. Holmyard, ‘An alchemical tract ascribed to Mary the Copt’, *Archeion* (1927) 8(2), pp. 161–7.

⁶⁹ Al-Ṣafadī, op. cit. (52), vol. 1, p. 22.

⁷⁰ Al-Ṣafadī, op. cit. (52), vol. 1, p. 23.

⁷¹ Richard Todd, ‘Classical poetic motifs as alchemical metaphors in the *Shudhūr al-Dhahab* and its commentaries’, *Asiatische Studien* (2021) 75(2) (2021), pp. 665–83; Regula Forster, ‘Alchemical stanzaic poetry (muwashshah) by Ibn Arfa‘ Ra’s (fl. twelfth century)’, *Asiatische Studien* (2021) 75 (2), pp. 637–64.

⁷² Al-Ṣafadī, op. cit. (52), vol. 1, p. 23.

⁷³ E.g. Ursula Weisser (ed.), *Das ‘Buch über das Geheimnis der Schöpfung’ von Pseudo-Apollonios von Tyana*, Berlin: De Gruyter, 1980, p. 198; Jābir ibn Ḥayyān, op. cit. (33), p. 54. The latter talks about latency in terms of the accidental and essential qualities of metals, and how manipulating the proportions of sulphur and mercury in the body can cause internal change in the substance to make it into gold.

⁷⁴ Al-Ṣafadī, op. cit. (52), vol. 1, p. 24.

argues that this is a far-fetched interpretation of the phrase but the Šūfī is undeterred and silences Ibn Taymiyya by asking him whether it truly was a far-fetched interpretation, or whether it simply contradicted what Ibn Taymiyya wanted it to mean.

The theme of unlikely or overly allegorical interpretation continues, with al-Šafadī quoting his contemporary, the noted agronomist and geographer Shams al-Dīn al-Ansārī al-Dimashqī (d. AD 1327/AH 727): ‘some say that the *maqāmāt* and *Kalīla wa dimna* are symbols in alchemy ... and all this is [just] out of passion and their love for it’.⁷⁵ The *maqāmāt* refers to the well-known collection of about fifty tales known as *Maqāmāt al-ḥarīrī*, and *Kalīla wa dimna* is one of the best-known tales in the Arabic-speaking world, though neither of these works is thought to be alchemical. Al-Šafadī continues to adopt an increasingly critical tone:

I met one who experimented and toiled, and was troubled in his pursuits, and came to regard its most serious parts as play. And so he wrote on some of the writing of Jābir ibn Ḥayyān, the pupil of Ja‘far al-Šādiq: ‘this is he who in his sayings has tempted the ancients and moderns, you are not but a destroyer [*kāsir*], he lied who called you a mender [*jābir*].’⁷⁶

Most of the remainder of this discussion is dedicated to quoting snippets of poetry that make light of alchemy. In keeping with a theme that runs throughout his passages on alchemy, we hear about unfortunates who spent their lives and labours in the failed pursuit of transmutation, for instance. These include Khālīd bin Yazīd and, curiously, the respected religious scholars Taqī al-Dīn ibn Daqīq al-‘Īd (d. AD 1302/AD 702) and Abū al-Ma‘ālī al-Juwaynī (d. AD 1085/AH 478, better known as Imām al-Ḥaramayn). The latter was supposedly killed by an errant tongue of flame while trying to solve an alchemical problem.⁷⁷ Their memory occasions some poems by Abbasid poet Kamāl al-Dīn ‘Alī ibn Nabīh (d. AD 1222/AH 619), including on the theme of what al-Šafadī dubs the alchemy of love:

His productions of alchemy have been shown true to my eye,
When he increases in redness upon sighting me [a reference to tincturing];
For by my casting this instant elixir,
the youth returns to his cheek.⁷⁸

Or another poem by a Maghribī poet:

Rise to the alchemy of drinking with nobility,
where you will find no miserly drinker,
Cast out elixirs from these full-mooned cups,
you will turn them all into suns.⁷⁹

⁷⁵ Al-Šafadī, op. cit. (52), vol. 1, p. 24.

⁷⁶ Al-Šafadī, op. cit. (52), vol. 1, pp. 24–5.

⁷⁷ Curiously, al-Šafadī does not repeat these in his biographical entries in either of his major biographical dictionaries, op. cit. (65), vol. 19, pp. 116–19; Khalīl ibn Aybak al-Šafadī, *A‘yān al-‘asr wa awān al-naṣr* (ed. ‘Alī Abu Zayd et al.), 2 vols., Beirut: Dar al-fikr al-mu‘asir, 1998, vol. 1, , p. 194, accessed through shamela.ws.

⁷⁸ Al-Šafadī, op. cit. (52), vol. 1, p. 25. For references to ‘reddening’ as a symbol in alchemy see Ibn Umayl, op. cit. (13), pp. 8–11, 18–19. From the latter: ‘all seekers of this science, if you want to cure your souls from the disease of poverty and from all seductions and sorrows then dye the gold red. For if you dye it red, it will hold the dye’.

⁷⁹ Al-Šafadī, op. cit. (52), vol. 1, p. 25.

Admittedly, this does not translate as elegantly as the original, but the metaphor here, as al-Şafadī himself tells us, is apt because ‘the masters of alchemy make the moon the symbol of silver and the sun that of gold’, and the wine here is likened to the elixir.

He continues in a similar vein for the remainder of the discussion, presenting some alchemy-critical poetry (of which he disapproves) before moving on to a poetic discussion of sycophants, quoting three short poems that play on the motif of acquiring gold by the ‘alchemy’ of praising the powerful.⁸⁰ Al-Şafadī dismisses these as coming from a place of ‘corrupted imagination’ and ‘ignorance over the essence of alchemy’, and then quotes his longest alchemical poem yet, which he attributes to the ‘Satan of Iraq’, Anusharwān al-‘Irāqī (d. AD 1179/AH 575):⁸¹

And of what Jābir has produced of the art, I have experimented
 Oh how much clay did I carry, and rest hopes upon
 And atop the alum, did I sublimate sulphur to mercury
 And how many alembics did I light above fires, and distillations perform
 And to the bodies I softened, and spirits I sweetened,
 And to Venus I’ve purified, and to the Sun I have calcified
 And how much of the noble substances did I condense in crucibles
 And how much with tongs in my hand did I burn
 And not one preparation was correct, but certainly, I did go backward.⁸²

The final line of this poem employs a pun on words with the root d-b-r, which forms the base for the word ‘to prepare’ (as in *tabīr*) as well as for the word for ‘posterior’. Al-Şafadī then quotes a couplet by the famous poet al-Būwayşrī (AD 1295/AH 696), who is most famous for his poem in praise of the Prophet Muḥammad. Al-Būwayşrī’s poem contains alchemical puns which are used to criticize a group of his opponents whom he refers to as a ‘cursed elixir’, each constituent (or non-compound drugs, *mufriid*) of which was put together in a composite (*murakkab*) by a corrupted preparer (*mudabbir*).⁸³

Al-Şafadī draws the discussion to an end with a similarly irreverent tone. He tells us of al-Ẓahīr al-Bārīzī, a Şūfī shaykh and poet, who composed a poem for someone who allegedly had twin children, a boy and a girl, with a black concubine:

The Lord of the Throne has singled you out with twins,
 and from the darkness of the ocean you extract the treasure;
 your prick awoke as an heir to Jābir’s science,
 and gave of its ejaculation [also the word for casting elixir] the sun and the moon.⁸⁴

Al-Şafadī’s peculiar account of alchemy again raises several interesting points. First, as was the case with al-Jildakī’s work, the concept of *rumūz* is central to al-Şafadī’s text. From the very first mention of alchemy, attention is drawn to its encrypted nature. However, unlike al-Jildakī, no rationale is given for this secrecy. Indeed, al-Şafadī appears to be treating these secretive practices with outright ridicule.

Second, while al-Şafadī is somewhat flippant, this does not mean that he does not consider alchemy to be a legitimate scholarly endeavour. The first parts of his discussion, which

⁸⁰ Al-Şafadī, op. cit. (52), vol. 1, p. 26.

⁸¹ Al-Şafadī, op. cit. (52), vol. 1, p. 25. For a brief entry on this poet see al-Şafadī, op. cit. (65), vol. 9, pp. 243–5.

⁸² Al-Şafadī, op. cit. (52), vol. 1, p. 26.

⁸³ Al-Şafadī, op. cit. (52), vol. 1, p. 27.

⁸⁴ Al-Şafadī, op. cit. (52), vol. 1, p. 27. On the poet see al-Şafadī, op. cit. (65), vol. 6, p. 114.

as seen previously considered the possibility of and conditions for transmutation, are relatively prosaic and conclude with a seeming consensus among the sources he cites that, as far as natural-philosophical (*ṭabīʿī*) principles are concerned, transmutation is possible. Furthermore, it should be noted that al-Ṣafadī's drawing on alchemy as a rich idiom for theological, polemical and satirical ends should not be read as dismissal of the discipline. Instead, such usage could, in the world of an *adīb* like al-Ṣafadī, be read as a celebration of its multivalency. As noted above, alchemical uses of poetry – and conversely poetic uses of alchemy – were far from uncommon, even among alchemists themselves.

Third, al-Ṣafadī seems to be gesturing in the structure of his discussion towards a broad idea found in both of the other sources discussed in this paper: that a firm grounding in the principles of natural philosophy was a necessary precursor to studying alchemy and interpreting *rumūz*. Without such principles, supposed acts of *taʿwīl* would simply descend into folly.

This idea requires some unpacking. The idea that an alchemist must first study the principles of natural philosophy is found in al-Ṭughrāʿī's *Ḥaqāʾiq al-istishhād*, the main aim of which was to respond to Ibn Sīnā's arguments against transmutation, as al-Ṣafadī notes at the beginning of his discussion. Al-Ṭughrāʿī emphasizes that those who look at *rumūz* superficially and without a firm grounding in *ʿilm al-ṭabīʿī* are sure to fall into error.⁸⁵ He is highly critical of those besmirching the name of alchemy with misleading and ultimately nonsensical allegory, maintaining that true alchemical *rumūz* conceal instructions for those already versed in the appropriate precepts or original principles of the science. However, al-Ṭughrāʿī also insists that it is not the alchemist's responsibility to prove or expound these principles as alchemy is a segmentary science (*juzʿī*) rather than a complete one (*kullī*).⁸⁶ He seems to imply that these original precepts are the principles of all of the natural sciences, common to other disciplines like medicine, saying: 'it is not on the physician to prove the existence of the four elements or that there are nine humours, but rather he takes that from the possessor of natural science [*ʿilm al-ṭabīʿī*]'.⁸⁷ So for al-Ṭughrāʿī, *taʿwīl* of alchemical symbols requires an understanding and application of *ʿilm al-ṭabīʿī*, and so to perform *taʿwīl* without the required knowledge should be treated with scepticism.

Al-Ṣafadī, for his part, seems to gesture at a similar position. He foregrounds his discussion with debates on alchemy on the basis of *ʿilm al-ṭabīʿī*. When it comes to *taʿwīl*, he appears to be ambivalent, first using the word to rebuke someone for over-allegorical or unlikely interpretation, but then censures Ibn Taymiyya for unfairly accusing someone else of providing unlikely interpretations, in this case of Ibn ʿArabī's words. In short, al-Ṣafadī seems to be suggesting that there can be good and bad *taʿwīl* and in doing so demonstrates an appreciation of the polyvalency of this concept in alchemical contexts.

In drawing on this polyvalency, al-Ṣafadī subtly nods to his own knowledge of the methods used by alchemists to conceal and disclose their learning. He principally does this by inserting a religious discussion in the middle of the debate on alchemy, as the hinge between the discussion on natural-philosophic precepts and, broadly speaking, alchemical metaphor. This approach seems to have been intended as an intentional mimicry of a certain form of alchemical concealment and disclosure: *tabdīd al-ʿilm* (the 'dispersion of knowledge').⁸⁸ This was the act of cutting up different parts of a specific text or alchemical

⁸⁵ Al-Ṭughrāʿī, op. cit. (36), p. 52; see also Takatomo Inoue, 'Avicennian natural philosophy and the alchemical theory of Al-Ṭughrāʿī in *Ḥaqāʾiq al-istishhād*' (PhD dissertation, McGill University, 2017), pp. 80–1.

⁸⁶ Al-Ṭughrāʿī, op. cit. (36), p. 53.

⁸⁷ Al-Ṭughrāʿī, op. cit. (36), p. 53.

⁸⁸ In addition to Gardiner, op. cit. (2), p. 412, see Haq, op. cit. (26), pp. 6–7, pp. 13–14; Omer Michaelis, "'Therefore I have removed the veil': disclosure of secrets in eleventh-century Islam and the literary character of Maimonides's guide", *Harvard Theological Review* (2020) 113(3), pp. 378–404, esp. 397 n. 69; Amir-Moezzi, op. cit. (32), pp. 229–30 n. 679. See the latter's discussion of *tabdīd al-ʿilm*.

procedure across several different books, so only those dedicated enough to seeking out and reading the entire corpus could have access to the full version. Here, we have a specific variant on this that seems to harken back to Jābir:

Do not deny, O my brother, the discourse concerning religion in the middle of a discourse on alchemy without the latter having been completed; or if you find a discourse on alchemy after a discourse on religion before the principles of the latter have been fully established.⁸⁹

If I am correct in my analysis, al-Ṣafadī, through the structure of his argument, is distinguishing between what he regards as alchemy proper, and alchemy which consists in overenthusiastic attributions of alchemical symbolism, while maintaining that one should not be too hasty in accusing someone of the latter. To emphasize this, he chooses to demonstrate his own knowledge of alchemical disclosure, mimicking Jabirian *tabdīd al-ʿilm* before going on to explore alchemy's wider metaphorical uses in a gesture to those already somewhat initiated in this practice. Whatever the efficacy of this analysis, it is clear that al-Ṣafadī's discussion of alchemy shows an appreciation of the art in both its theoretical and metaphorical dimensions, while maintaining due scepticism towards some of the excesses of its practitioners who claim to see *rumūz* everywhere.

Alchemical reading cultures: an intertextual approach

In this paper, I have examined two very different accounts of alchemy, each written for distinct audiences. Al-Jildakī's work was intended for fellow practitioners and students of the art, adopting a serious and didactic tone steeped in the metaphysical significance of alchemical pursuit. Al-Ṣafadī's perspective, by contrast, appears aimed at a broader, more literary readership and adopts an often irreverent tone that betrays a degree of scepticism towards alchemy itself. Despite their differences, both accounts reinforce the claim introduced at the outset of this article: that conceptions of *rumūz*, regarded as essential to alchemical practice, varied considerably.

The second aim of this article has been to show that by comparing these different conceptions of *rumūz*, we gain insight into alchemical practice and the transmission of alchemical knowledge. As noted by many modern scholars, alchemists like al-Jildakī often emphasized the importance of engaging a sage to help them on their way to alchemical wisdom, in ways that seem to parallel certain religious master–disciple relationships. We see this in both al-Jildakī's and al-Ṣafadī's uses of *taʿwīl*. I have suggested, however, that there is an equally important aspect of alchemical pedagogy at play here: the emphasis on first training (either individually or with a teacher) in the principles of *ʿilm al- al- ṭabīʿī*. This final section will proceed by first addressing what we can learn about this from Ibn al-Akfānī's and al-Ṣafadī's interrelated accounts, and then comparing them with al-Jildakī's to pose some tentative conclusions about pedagogical variations among scholars.

Ibn al-Akfānī's *Irshād al-qāṣid ilā asnā al-maqāṣid* is a foundational work in the classification of the sciences. Its influence is evident in later works such as the bureaucratic manual of al-Qalqashandī (d. AD 1418/AH 821), the encyclopedias of Tāshkōprizāde (d. AD 1561/AH 968) and Ḥājji Khalīfa, and the classificatory writings of the Moroccan Ṣūfi

⁸⁹ See Haq, op. cit. (26), pp. 2, 37 n. 44; I chose to slightly modify his translation here, to more accurately reflect common usage of the phrase *lā tunkir*. See the original in 'Kitāb al-majīd', in Jābir ibn Ḥayyān, *Mukhtār rasā'il Jābir ibn Ḥayyān* (ed. Paul Kraus), Baghdad: Maktabat al-Muthanna, 1969, p. 115.

al-Yūsī (d. AD 1691/AH 1102).⁹⁰ Much of what we know about Ibn al-Akfānī comes from al-Ṣafadī's biographical dictionaries, as well as their personal correspondence, which he recorded alongside other sources in a different work.⁹¹ Ibn al-Akfānī was one of al-Ṣafadī's teachers, primarily instructing him in astronomy and the mathematical sciences. While al-Ṣafadī emphasizes Ibn al-Akfānī's polymathic talents, he notes that his primary occupation was that of a physician at the Bīmāristān al-Manṣūrī in Cairo.

Though al-Ṣafadī does not discuss Ibn al-Akfānī's alchemical work in detail, he provides a number of suggestive glimpses. For example, he quotes a couplet from Ibn al-Akfānī criticizing physicians who neglect alchemical remedies, and notes that he frequently helped overenthusiastic alchemists correct their failed procedures.⁹² Moreover, al-Ṣafadī's own account of alchemy suggests that the two men engaged extensively on the topic. For instance, it is on Ibn al-Akfānī's authority that al-Ṣafadī relates the story of al-Ṭuḡhrā'ī and the archers – possibly an allegorical reference to the alchemical secret. Ibn al-Akfānī also provides al-Ṣafadī's main source for the conditions necessary for alchemical success. Even one of al-Ṣafadī's etymologies for *al-kīmīyā'* appears to derive from Ibn al-Akfānī, though he is not explicitly credited.⁹³ Altogether, al-Ṣafadī's testimony paints a picture of Ibn al-Akfānī as deeply engaged in alchemy in ways not fully evident from his extant writings.

This in itself is an important point, particularly when understood in the context of what Ibn al-Akfānī says about *rumūz*. In the introduction to the *Irshād*, Ibn al-Akfānī tells us that earlier scholars preferred oral transmission and only began writing down their teachings when scholarly ranks dwindled.⁹⁴ To keep knowledge of certain sciences away from charlatans and others who might use them to base ends like flattery and material gain, *rumūz* were used to encrypt them. When addressing literary style, Ibn al-Akfānī advises clarity and the avoidance of metaphor but nevertheless adds the caveat of 'except, by God, when using a *ramz*'.⁹⁵ In the context of alchemical *rumūz* specifically, he says relatively little:

There are in the books of the sages, of all schools, discussions on the Stone, its essence, and the methods of producing it – using *rumūz* beyond mere riddles and puzzles. This they do for the public benefit. The books of the ancients [on alchemy], unlike those of other sciences, have not been clearly transmitted. The books of Jābir ibn Ḥayyān are perplexing.⁹⁶

This suggests that while Ibn al-Akfānī does not seem to have written any alchemical works himself, he almost certainly taught alchemy orally.

In Ibn al-Akfānī, then, we have yet another conception of *rumūz*, this time as a practical necessity resulting from the lack of capable scholars. For Ibn al-Akfānī, there does not appear to be any deeper significance to alchemical writing, nor anything like the parallels to *ta'wīl* suggested in other accounts. Indeed, as with the first half of al-Ṣafadī's account, alchemy for Ibn al-Akfānī seems to be an exercise in natural philosophy. His account of alchemy in the *Irshād* begins with a clear statement that alchemy is a discipline aimed

⁹⁰ Ibn al-Akfānī, *De egyptische arts Ibn al-Akfānī (gest. 749/1348) en zijn indeling van de wetenschappen* (ed. Jan Just Witkam), Leiden: Ter Lugt Pers, 1989, p. 22 (English); Justin Stearns, *Revealed Sciences: The Natural Sciences in Islam in Seventeenth-Century Morocco*, Cambridge: Cambridge University Press, 2021, p. 87.

⁹¹ Ibn al-Akfānī, op. cit. (90), pp. 18 (English), 23–44 (Dutch); see also Al-Ṣafadī, op. cit. (65), vol. 2, pp. 20–1; al-Ṣafadī, op. cit. (77), vol. 4, pp. 225–31, accessed through shamela.ws.

⁹² Ibn al-Akfānī, op. cit. (90), p. 33 (Dutch/Arabic).

⁹³ Ibn al-Akfānī, op. cit. (90), pp. 412, 53 (Arabic); Ullmann also attributes this etymology to Ibn al-Akfānī in 'al-Kīmīyā'', in Bearman, op. cit. (20).

⁹⁴ Ibn al-Akfānī, op. cit. (90), pp. 449, 16 (Arabic).

⁹⁵ Ibn al-Akfānī, op. cit. (90), pp. 448, 17 (Arabic).

⁹⁶ Ibn al-Akfānī, op. cit. (90), pp. 413, 52 (Arabic).

at investigating how mineral bodies might be stripped of their accidental qualities and receive qualities they did not initially appear to hold.⁹⁷ The account summarizes three broad avenues for doing this: using the stone to produce elixir, which we have already seen is something he says is shrouded in obscurity; the sulphur–mercury theory, which tries to replicate what nature takes thousands of years to produce; and the science of balances, which he says is concerned with studying the proportions of metals and their weights with regard to one another, and then mixing metals in these proportions. Ibn al-Akfānī then issues a warning to ‘those ignorants who intend to experiment without *qiyās*, while ignorant of its introductory principles’, arguing that they will never move beyond the most basic alchemical products as they will instead get lost in such things as animal hair and eggshells.⁹⁸

In a legal context, *qiyās* means reasoning by analogy, but when used more generally can mean arriving at a result by way of a syllogism.⁹⁹ On the whole, then, this account in the *Irshād* does not immediately suggest anything like a spiritual or mystical dimension to alchemy. We might add here that, while al-Jildakī certainly wrote in terms that suggested that this dimension existed, he too believed in the importance of a firm grounding in *‘ilm al- al- ṭabī‘ī*. In *Miṣbāḥ*, al-Jildakī tells us that the student should look to the works written by past sages on natural philosophy (*ṭabī‘iyyāt*), and perform ‘*qiyās* using logical principles’ before they get to work on alchemy.¹⁰⁰

Across all three sources discussed in this paper, we see that *rumūz* were central to alchemical practice, but in each case they occupied a different position. For al-Jildakī, there is at least some extent to which the act of decrypting *rumūz* either exhibited parallels to, or was partly contingent upon, a sort of exegesis. Al-Ṣafadī, while clearly aware that these parallels existed, did not necessarily take them altogether too seriously. For him, *rumūz* were arguably most interesting for their literary uses. Finally, for Ibn al-Akfānī, *rumūz* were a necessity, a replacement for the oral teaching which he seemingly preferred. If he did see any parallels between decrypting alchemical *rumūz* and exegesis, this is not recorded in the *Irshād*. What unites all three conceptions of *rumūz*, though, regardless of how one goes about decrypting them, is that the path to understanding them is seen as part of *‘ilm al- al- ṭabī‘ī*.

We might ask how this is reflected in their respective didactic approaches. This is difficult to say, although I would offer a few tentative remarks. Al-Jildakī seems to encourage a certain autodidacticism. Some of the terms he uses when addressing pupils in *Miṣbāḥ* suggest an emphasis on individual efforts, like his emphasis on *ijtihād*, which I translated as ‘effortful deliberation’, but which also bears the connotation of effort (cognate with *jihād*), and in Islamic legal discourse can also mean independent reasoning.¹⁰¹ Additionally, in a later passage, having listed a number of alchemical greats, he tells the student–reader to ‘engage in [*muṭāla‘a*] of the books of this people’.¹⁰² According to Konrad Hirschler, *muṭāla‘a* in the period almost exclusively refers to the act of reading alone, as opposed to the much more widely used *qirā‘a*, which mostly referred to recitation or reading with a teacher, though other meanings are possible.¹⁰³

While al-Ṣafadī himself does not address the question of alchemical writing, it is noteworthy that in the introduction to the *Sharḥ*, he also seems to advocate this generally less

⁹⁷ Ibn al-Akfānī, op. cit. (90), pp. 413, 52 (Arabic).

⁹⁸ Ibn al-Akfānī, op. cit. (90), pp. 412, 53 (Arabic).

⁹⁹ Marie Bernand and Gérard Tropeau, ‘*Qiyās*’, in Bearman, op. cit. (20).

¹⁰⁰ BNF MS Arabe 2615 3r.

¹⁰¹ Calmard, Jean, ‘*Mudjtahid*’, in Bearman, op. cit. (20).

¹⁰² BNF MS Arabe 2615, 5r.

¹⁰³ Konrad Hirschler, *The Written Word in the Medieval Arabic Lands: A Social and Cultural History of Reading Practices*, Edinburgh: Edinburgh University Press, 2022, pp. 13–14.

common way of interacting with the written word: 'Reading [*muṭālaʿa*] lends comfort to the soul, and you find in revision [*murājaʿa*] what you find in the exchanging of [wine] glasses, for the book is your best boon companion and friend'.¹⁰⁴

Finally, Ibn al-Akfānī, as we have seen, seemed to prefer teaching alchemy orally and it is perhaps notable that both he and al-Ṣafadī seem to have studied natural philosophy together in a group setting. We learn this from al-Ṣafadī's biographical notice on the religious scholar and physician Ibn al-Qūbaʿ (d. AD 1338/AH 738), in which he claims that he and Ibn al-Akfānī attended lessons on Fakhr al-Dīn al-Rāzī's *al-Mabāḥith al-mashriqiyya* (cited earlier for his arguments on transmutation), suggesting that learning this sort of material with a teacher was at the very least not unheard of in the period.¹⁰⁵

From this, though cautiously, it is possible to suggest that esoteric approaches to alchemical knowledge, if even only in their linguistic conventions, seemingly resulted in a greater emphasis being placed on self-education alongside the instruction of a guide in the later stages¹⁰⁶ – the sort of self-education, incidentally, that al-Ṣafadī also celebrates in the pursuit of *adab*. For scholars who taught alchemy after the fashion of Ibn al-Akfānī, that is to say without any reference to its esoteric dimensions, there seems to be less emphasis placed on self-teaching.

Conclusion

Recent scholarship by the likes of Hirschler has led the way in expanding and refining our understanding of scholarly paradigms, particularly in the mainstream legal and religious sciences. Khaled El-Rouayheb, working on a later period, adds further refinement by suggesting that reading practices varied from one discipline to the next, with reading to oneself being more common in poetry, for example, than in law.¹⁰⁷

If there is any general conclusion that can be drawn from this article, however, it is that at least when it comes to alchemy, it is at present difficult to generalize about scholarly practices across the whole discipline. In part, this is due to the discipline's ever-porous boundaries, made all the hazier by their being shrouded in deliberately obscure layers of code. Alchemy occupies a unique place in the high medieval Islamicate landscape for two reasons. First, those discussing, seeking, criticizing and fearing it came from all walks of scholarly life. Second, its *rumūz*, metaphors and other linguistic idiosyncrasies spread into virtually every corner of scholarly discourse. For this reason, there is hardly a better place to set about exploring how the diffuse intellectual pursuits of the time constituted and reconstituted their relationships with one another, and what this means in terms of the scholarly practices and reading communities that grew around and across these different disciplines. This article has presented a modest contribution to this discussion, showing what there might be to gain by expanding our source base, tracing how metaphors, linguistic conventions and scholarly heuristics migrated both across ostensibly separate areas of scholarly enquiry, and between scholars with very different individual inclinations.

¹⁰⁴ Al-Ṣafadī, op. cit. (52), vol. 1, p. 12.

¹⁰⁵ Al-Ṣafadī, op. cit. (77), vol. 5, p. 152. This account, in *Aʿyān*, does not appear to be in the larger work, *Kitāb al-wāfi*.

¹⁰⁶ See Gardiner, op. cit. (2), pp. 409–12.

¹⁰⁷ Khaled El-Rouayheb, *Islamic Intellectual History in the Seventeenth Century: Scholarly Currents in the Ottoman Empire and the Maghreb*, Cambridge: Cambridge University Press, 2015, p. 98. On alchemical reading practices in the English context see also Jennifer M. Rampling, 'Reading alchemically: guides to "philosophical" practice in early modern England', *BJS Themes* (2020), pp. 57–74.

Acknowledgements. I would like to thank Salam Rassi, who provided me with invaluable feedback on an earlier draft of this paper. All mistakes or omissions are my own.

Competing interests. The author declares none.