

## **At the Origins of the *De Perfecto Magisterio*: A Translation from Arabic or a Latin Composition?**

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The article focuses on the question of the original language of composition of the *De perfecto magisterio*, a Latin treatise on alchemy attributed to Rāzī and Aristotle. After studying the arguments in favour of an Arabic origin, the author examines the former arguments in favour of a Latin original composition. Afterwards he brings a new strong and decisive argument: quotations from the *Liber dabessi* and its *Tabula Smaragdina*, a Latin text prior to the *De perfecto magisterio*.

**Keywords:** alchemy, *De perfecto magisterio*, Rāzī, Aristotle

### **Introduction**

Alchemy appeared in the West during the eleventh and twelfth centuries through Latin translations of Arabic alchemical texts. In the thirteenth century alchemy developed in the Latin world and more and more alchemical texts were written in Latin. This period of transition generates in-depth doubts about the origin of several Latin alchemical texts: are

they treatises translated from Arabic or works written in Latin since their origin?<sup>1</sup> This question was reinforced by Latin authors who wanted to give their texts the appearance of a translation from Arabic. In that respect, the *De perfectio magisterio*, a fundamental treatise for the history of alchemy, is a shining example.<sup>2</sup> Attributed either to the Greek philosopher Aristotle or to the Persian physician, philosopher, and alchemist Rāzī (251–323 AH / 865–935 AD),<sup>3</sup> the work was widely copied during the Middle Ages.<sup>4</sup> The treatise is organised according to a frequent division of Latin alchemical texts. It includes a *theorica*, which first contains a comparison between alchemy and astronomy and an account of the author's cosmology and description of materials, and a *practica*, in which the author gives recipes of separation and preparation.<sup>5</sup> At the heart of the first stage of the assimilation of the Arabic tradition and the creation of Latin alchemy, this treatise raises many questions, which have not been fully answered. Among them, the issue of its origin, Arabic or Latin, has been the subject of debate. Both hypotheses have been discussed. If, at first, analyses were in favour of an Arabic origin,<sup>6</sup> the most recent studies suggest a Latin composition from the outset.

## Arguments in favour of an Arabic origin of the treatise

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<sup>1</sup> To identify Latin translations from an Arabic original, see the methodology applied to the alchemical pseudo-Avicennian *De anima* in S. Moureau, “Questions of Methodology about Pseudo-Avicenna's *De anima in arte alchemiae*: Identification of a Latin Translation and Method of Edition”, in *Chymia: Science and Nature in Early Modern Science (1450–1750)*, eds M. Lopez-Perez, D. Kahn, M. Rey-Bueno (Newcastle: Cambridge Scholars Publishing, 2010), 1–18. This methodology is explained theoretically in C. Macé *et al.*, “Chapter 3. Textual Criticism and Text Editing”, in *Comparative Oriental Manuscript Studies: An Introduction*, eds A. Bausi *et al.* (Hamburg: Tredition 2015), 321–466.

<sup>2</sup> I am currently working on the *De perfectio magisterio* for my PhD thesis as research fellow at the FNRS.

<sup>3</sup> On Abū Bakr Muḥammad b. Zakariyyā' al-Rāzī, cf. Rāzī, *La médecine spirituelle*, présentation et traduction par R. Brague (Paris: Flammarion, 2003); L. E. Goodman, “al-Rāzī”, in *Encyclopaedia of Islam*, eds P. Bearman, Th. Bianquis, C. E. Bosworth, E. van Donzel, W. P. Heinrichs, 2<sup>nd</sup> ed. ([http://dx.doi.org/10.1163/1573-3912\\_islam\\_SIM\\_6267](http://dx.doi.org/10.1163/1573-3912_islam_SIM_6267), consulté en ligne le 29/07/2019); S. Stroumsa, *Freethinkers of medieval Islam: Ibn al-Rāwandī, Abū Bakr al-Rāzī, and their impact on Islamic thought* (Leiden: Brill, 1999).

<sup>4</sup> We can currently identify forty-two complete or fragmented manuscripts of the treatise.

<sup>5</sup> The separation and preparation of the substances are two preliminary steps in order to prepare them for the *opus*.

<sup>6</sup> F. Hoefer, *Histoire de la chimie*, 2<sup>nd</sup> ed. (Paris: Firmin-Didot, 1866), 340–343; M. Berthelot, *La Chimie au Moyen Âge* (Paris: Imprimerie Nationale, 1893), I, 317.

Berthelot began research on the topic in the late nineteenth century. For him, there was no doubt that the author of the treatise was of Arabic origin.<sup>7</sup> His opinion remained the generally accepted one until the article of Ruska in 1939.<sup>8</sup> His first argument in favour of an Arabic origin was to be found in the attribution of the treatise. From the Middle Ages, the text used to be attributed to Rāzī. This attribution was already quoted in Petrus Bonus's *Margarita pretiosa novella* (c. 1330)<sup>9</sup>: “*unde Rasis huius artis egregius, libro Perfecti magisterii, dicit sic*”,<sup>10</sup> “hence Rāzī, famous in this art, speaks in this way in his *Liber Perfecti Magisterii*”. Similarly, at least four manuscripts attribute the text to Rāzī.<sup>11</sup>

Berthelot's second point, linked to the first, was the *explicit* of the text in manuscript Paris, BNF, lat. 6514. At the end of the text, one reads the following words: *Explicit liber raxis minoris translationis*, “End of the book of the minor translation of Rāzī,” added after the text (f. 125r).<sup>12</sup>

[Figure 1 here]

Yet, those arguments are unconvincing. This mention is only found in the Paris manuscript. It can be an addition of a copyist at some point of the tradition. Moreover, attributing a text to a famous authority in order to widen its diffusion was common in the

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<sup>7</sup> Berthelot, *La Chimie au Moyen Âge*, 311–319.

<sup>8</sup> J. Ruska, “Pseudepigraphie Rasis-Schriften”, *Osiris* 7 (1939): 45–54.

<sup>9</sup> D. Kahn, *Alchimie et paracelsisme en France à la fin de la Renaissance (1567-1625)* (Genève: Droz, 2007), 42.

<sup>10</sup> L. Zetzner, *Theatrum chemicum*, 1622, p. 670.

<sup>11</sup> Paris, BNF, lat. 6514; Paris, BNF, lat. 7162; Genève, BPU, 82; Bologne, BU, lat. 928. The manuscript of Milan (Ambros., E 51 sup.) quotes the name of Rāzī as the translator and not as the author: *Incipit liber perfecti magisterii Aristotelis quem transtulit Rasis* (Beginning of Aristotle's *Liber perfecti magisterii*, which Rāzī translated).

<sup>12</sup> This explicit is unclear: Rāzī could be either the author or the translator of the treatise following the interpretation of the sentence. Moreover, the adjective “minor” could qualify Rāzī and refer to another Rāzī in contrast to the more famous Abu Bakr Ibn Zakariyyā al-Rāzī.

alchemical tradition, already from Antiquity.<sup>13</sup> The arguments for a translation from the Arabic are not backed by sound arguments and the hypothesis can be easily questioned.

### **Arguments in favour of a Latin composition of the treatise**

In the nineteenth century Wüstenfeld rejected the idea of a translation from Arabic without any further development.<sup>14</sup> According to him the treatise was written in Latin. After him, in 1939, Ruska supported the Latin origin of the treatise relying on a study of the syntax of the sentences.<sup>15</sup> Currently, the question of the origin of the treatise, which remained open for a long time, can be discussed again thanks to an in-depth analysis of the vocabulary and the content of the text.

First, although the lack of evidence is not a proof, no Arabic original has ever been discovered.<sup>16</sup> At this stage of research, not only is there no manuscript with an Arabic text equivalent to the *De perfecto magisterio*, but no mention of the treatise has been found in Arabic sources. The Arabic text may obviously have been lost during its transmission, but the lack of an Arabic original or even of a known mention in Arabic sources points in the direction of a Latin composition.

Moreover, Ruska suggested considering the treatise as a product of medieval scholasticism and not as a translation from Arabic.<sup>17</sup> To prove it, he resorted to arguments of a philological nature: the structures of the sentences are more Latin than Arabic. The text itself

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<sup>13</sup> On the use of pseudonyms in alchemy, see R. Halleux, *Les textes alchimiques* (Turnhout: Brepols, 1979), 97–100.

<sup>14</sup> F. Wüstenfeld, *Die Übersetzungen arabischer Werke in das lateinische seit dem XI. Jahrhundert* (Göttingen: Dieterich, 1877), 75.

<sup>15</sup> Ruska, “Pseudepigraphie Rasis-Schriften”, 48. See next page.

<sup>16</sup> To my knowledge, this argument has never been raised before.

<sup>17</sup> Ruska, “Pseudepigraphie Rasis-Schriften”, 47–48.

contains Latin constructions. The sentences are usually quite long and balanced by phrases like “*non solum... sed tamen*”, “*non enim... sed tantum*” or even “*cum... tum*”. One can already see in the introduction of the treatise that the style “ample and adorned [...] involves a scholastic author right from the first lines”.<sup>18</sup>

*Cum* studii solertis indagine universarum artificia rerum philosophia compererit sedulitate<sup>19</sup> *tum* karissime filii exquisitionis sagacie alkimice artis magisterium adinuenit, *quod eatenus* reliquarum rerum praepollet argumentis, *quatinus ipsum*<sup>20</sup> in secretioribus nature abditis reperitur. *Non enim* sufficit huius artis operatori rerum apparentes *et manifestas*<sup>21</sup> *tantum* cognouisse naturas [...].

When, by the investigation of an ingenuous study, philosophy discovered the making of all things with application, then it found, dearest son, the magistry of the acute enquiry of the alchemical art, which outweighs the arguments of all the other things to the same extent as it is itself found in nature’s most secret hidden places. Indeed, for the one who practises this art, it is not enough to only know the apparent and manifest natures of things [...].

Other examples of balanced sentences or phrases which contain typical Latin structures are found in the text.

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<sup>18</sup> Ruska, “Pseudepigraphie Rasis-Schriften”, 48. My own translation from German.

<sup>19</sup> Ruksa quoted the text from Renaissance editions; for this article, I use manuscript Palermo, Biblioteca comunale, 4 Qq A 10 (here f. 221r). All extracts (texts or words) are quoted as they appear in the text of this manuscript. However, the reading of the Palermo manuscript, *sed utilitatem*, hardly makes sense here. For this reason, I have chosen the reading *sedulitate* attested in manuscript Cambridge, University Library, Ii 3 17, which is the manuscript I chose for this article in order to correct the Palermo manuscript when readings appear to be wrong.

<sup>20</sup> The reading of the manuscript of Palermo, *ipso*, has to be corrected in *ipsum*, as read in manuscript Cambridge, University Library, Ii 3 17.

<sup>21</sup> I choose the reading *manifestas* from manuscript Cambridge, University Library, Ii 3 17 instead of the *manifestus* one reads in the Palermo manuscript.

Ex.: *Loquitur enim hec ars **non solum** de eleuatione et depressione elementorum **uerum etiam** elementatorum.* (f. 221r)

Indeed, this art does not deal with the raising and the lowering of the elements only but also of the *elementata*.

Ex.: *Et **sicut** accidentia non possunt suas qualitates ostendere **nisi** cum fuerint substantiis sociata, **sic** lapides fugientes ab igne non possunt suas demonstrare uirtutes **nisi** cum fixis fuerint<sup>22</sup> maritati.* (f. 221r)

And as the accidents cannot show their qualities unless they are associated with substances, so the stones which flee from fire cannot display their virtues unless they have been joined/married to fixed (materials).

Ex: *Satage **igitur** ut non sis sophysta **sed** sophus ut rerum uirtutes **non** meditatione solum, **uerum etiam** meditatione et experientia cognoscas. Meditatio **enim** absque experientia nil proficit, **sed** experientia absque meditatione proficit.* (f. 223v)

Thus do your best not to become a sophist but a sage, in order to know the properties of things not only by meditation but also by meditation and experience. Indeed, meditation without experience is useless, but experience without meditation is useful.

The vocabulary used in the treatise, which has been little studied so far, also supports the hypothesis of a Latin original. The vocabulary is indeed specific to the Latin language,

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<sup>22</sup> The reading of the manuscript of Palerme, *fuisse*, has to be corrected in *fuerint* attested in the manuscript Cambridge, University Library, Ii 3 17.

without addition of foreign words. There is no trace of the Arabic lexicon apart from a few very common transcriptions, which are divided in two main categories: materials and instruments. Here is the list of Arabic terms I have found in the *De perfectio magisterio*.<sup>23</sup>

[Table 1 here]

The borrowings of names of instruments and materials can easily be explained. When alchemy spread into the Western world, the Latin language did not have the appropriate technical vocabulary. Many terms for alchemical items (materials or instruments for instance) did not exist in Latin and were borrowed from the Arabic in the form of transcriptions.<sup>24</sup> Some of those terms spread out in various alchemical treatises written in Latin and permanently integrated the Latin alchemical vocabulary. The words which are used in the *De perfectio magisterio* were already common at that time.<sup>25</sup>

Even if the arguments about the vocabulary and the syntax encourage considering the treatise as a Latin composition, it should however be pointed out that several treatises initially written in Arabic have been translated with a *beau style*.<sup>26</sup> Some translators, such as Hugo Sanctelliensis, tried to give an antique appearance to the treatise they were translating, by using a particularly elegant vocabulary, typically Latin, and resorting to rhetorical

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<sup>23</sup> This research was done for my doctoral thesis which aims to produce a critical edition of the treatise.

<sup>24</sup> On that subject, see J.-M. Mandosio, “La création verbale dans l’alchimie latine du Moyen Âge”, *Bulletin du Cange (ALMA)* 63 (2005): 137–147.

<sup>25</sup> In comparison, the *Responsiones Aros philosophi ad Nephes regem*, a work which was unquestionably translated into Latin from Arabic, contains many terms which sound Arabic such as *elsaphaer* from the Arabic الصفائر “aṣ-ṣafā’ir” or *ebac* from the Arabic أبَق “ābaq” (cf. S. Matton, *Responsiones Aros philosophi ad Nephes regem de philosophia malis et improbis occulta et sapientibus manifesta* [Paris: SÉHA, 2017], V, XI–XII.). Such terms, which leave no doubt as to an Arabic origin of the treatise, do not appear in the *De perfectio magisterio*.

<sup>26</sup> J.-M. Mandosio, “Humanisme ou barbarie ? Formes de la latinité et mémoire de l’Antiquité dans quelques traductions médiévales de textes philosophiques arabes”, in *Écritures latines de la mémoire, de l’Antiquité au XVI<sup>e</sup> siècle*, eds H. Casanova–Robin and P. Galand (Paris: Garnier, 2010), 233.

exaggeration.<sup>27</sup> The translator of the *De perfecto magisterio* may therefore have been one of those translators who knew the Latin scholastic language perfectly and disguised the Arabic origin of the text.

This is the reason why a new strong argument, which has never been raised concerning the origin of the treatise, must be added to the debate: the quotations in the *ratio prima* of another Latin text prior to the *De perfecto magisterio*, the Latin vulgate of the *Tabula Smaragdina*, probably taken from the *Liber dabessi*, are further evidence supporting a composition made originally in Latin.<sup>28</sup>

The quotations of the *Tabula Smaragdina* are in the introductory part of the *De perfecto magisterio*. After defining alchemy and its field of application, the author became interested in the *Tabula Smaragdina*.<sup>29</sup> This text with an encrypted meaning represented, according to legend, the teachings of Hermes Trismegistus. In the Middle Ages, it became the creed of alchemists.<sup>30</sup> Of Arabic origin, it spread out in the Western World in the form of three different Latin translations,<sup>31</sup> one of which is quoted in the *De perfecto magisterio*. The author of the *De perfecto magisterio* wanted to give an alchemical interpretation of this mysterious text.

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<sup>27</sup> J.-M. Mandosio, "Humanisme ou barbarie ? Formes de la latinité et mémoire de l'Antiquité dans quelques traductions médiévales de textes philosophiques arabes", 235.

<sup>28</sup> J. Ruska has already identified the quotation of some extracts of the *Tabula Smaragdina* but without developing the question further (Ruska, "Pseudepigraphie Rasis-Schriften", 50, n. 23).

<sup>29</sup> This is a text which, according to the legend, was inscribed on an emerald tablet found in the grave of Hermes Trismegistus, as a summary of his teachings (Hermès Trismégiste, *La Table d'Émeraude et sa tradition alchimique*, préface de D. Kahn [Paris: Les Belles Lettres, 1994]). On the *Tabula Smaragdina*, see also J. Ruska, *Tabula Smaragdina, Ein Beitrag zur Geschichte der hermetischen Literatur* (Heidelberg: Winter, 1926) and M. Plessner, "Neue Materialien Zur Geschichte Der Tabula Smaragdina", *Der Islam, Zeitschrift für Geschichte und Kultur des islamischen Orients* 16 (1927): 77–113.

<sup>30</sup> On the posterity of the text in the Middle Ages, see I. Caiazzo, "Note sulla fortuna della Tabula smaragdina nel Medioevo latino", in *Hermetism from Late Antiquity to Humanism. La tradizione ermetica dal mondo tardo-antico all'umanesimo.*, eds P. Lucentini, I. Parri and V. P. Compagni (Turnhout: Brepols, 2003), 697–711.

<sup>31</sup> On the three Latin versions of the *Tabula Smaragdina*, see J.-M. Mandosio, "La Tabula smaragdina e i suoi commentari medievali", in *Hermetism from Late Antiquity to Humanism. La tradizione ermetica dal mondo tardo-antico all'umanesimo.*, eds P. Lucentini, I. Parri and V. P. Compagni (Turnhout: Brepols, 2003), 681–696.



The whole section is introduced by *et hoc dedit Hermes intelligi in suo secreto quod de hoc opere composuit* (f. 222r) “and Hermes gave this to be understood in his secret that he composed on this work” and relates the words of Hermes. The author wants to explain the secret of the text and its relation to alchemy. The extracts from the *Tabula Smaragdina* are introduced in a similar way. The author uses an introductory sentence like *et hoc inquit/dixit Hermes in hoc prenominato secreto cum dixit* “and Hermes says this in his above-named secret when he says,” or a statement verb like *dixit, inquit* or *ait*. Most of the time, the quotation is followed by an explanation introduced by *id est* “this means [that]”.

If those quotations are important, it is because they illustrate the use by the author of another Latin text prior to the *De perfecto magisterio*: the Latin vulgate of the *Tabula Smaragdina* as shown in the table below. Of the three Latin versions of the *Tabula Smaragdina*, two were translated from Arabic by identified translators (Hugo Sanctelliensis and Philip of Tripoli). The third one, the most widespread version, is a version whose translator is unknown but “was initially part of an alchemical anthology of variable content which was passed under various titles,”<sup>32</sup> the *Liber dabessi* (also named *Liber Hermetis de blchkmkb* [= *alchimia*], *Secretum secretorum Hermetis*, and *Liber rebis*)<sup>33</sup>, before circulating and being extensively used in the Middle Ages.

[Table 2 here]

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<sup>32</sup> J.-M. Mandosio, “La Tabula smaragdina e i suoi commentari medievali”, 683. My own translation from Italian.

<sup>33</sup> On the *Liber dabessi*, see R. Steele, D. W. Singer, “The Emerald Table”, *Proceedings of the Royal Society of Medicine. Section of the History of Medicine* 21 (1928): 41–57; A. Colinet, “Le livre d'Hermès intitulé ‘Liber dabessi’ ou ‘Liber rebis’”, *Studi medievali* 36/2 (1995): 1011–1052; S. Moureau, “*Min al-Kīmiyā’ ad Alchimiam*. The Transmission of Alchemy from the Arab-Muslim world to the Latin West in the Middle Ages”, *Micrologus: natura, scienza e società medievali - nature, science and medieval societies* 28 (2020): 110.

As shown in the table, the version of the *Tabula Smaragdina* in the *De perfectio magisterio* is very close to the vulgate version extracted from the *Liber dabessi*. The *Liber dabessi* is thought to have been translated from Arabic in the twelfth century.<sup>34</sup> As the *De perfectio magisterio* is dated from the thirteenth century,<sup>35</sup> the version attested in the *Liber dabessi* is probably prior to the version of the *De perfectio magisterio*. However, the dating of the *Liber dabessi* is based on the declaration at the beginning of the treatise that alchemy was unknown in the West when the *Liber dabessi* was being translated.<sup>36</sup> In that respect, it should be noted that the translation may have been done in a place where alchemy came later. The dating of the *Liber dabessi* remains therefore uncertain and could be later than thought until now, although this does not appear very probable. Nevertheless, if the dating of both treatises is uncertain, one can hardly imagine the *Tabula Smaragdina* in the *De perfectio magisterio* being the original of the *Liber dabessi*, since it does not follow the usual order of the text while the *Liber dabessi* does follow the Arabic order. The *Liber dabessi* appears therefore to be prior to the *De perfectio magisterio*. The quotation of a Latin text that seems to date to the early penetration of alchemy in the West in the *De perfectio magisterio* is a strong argument supporting its composition in Latin.

The quotations of the *Tabula Smaragdina* seem not to be the only quotations of the *Liber dabessi*. Indeed, in at least fifteen witnesses of the *De perfectio magisterio*,<sup>37</sup> one finds a section called *De lapide benedicto* some parts of which are reminiscent of the Egyptian version of the *Liber dabessi*.<sup>38</sup>

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<sup>34</sup> J.-M. Mandosio, "Note sulla fortuna della Tabula smaragdina nel Medioevo latino", 683; R. Steele, D. W. Singer, "The Emerald Table", 41.

<sup>35</sup> Ruska, "Pseudepigraphie Rasis-Schriften", 53.

<sup>36</sup> J.-M. Mandosio, "Note sulla fortuna della Tabula smaragdina nel Medioevo latino", 683.

<sup>37</sup> This number may be bigger. Many manuscripts are not complete and stop far before the passage.

<sup>38</sup> Colinet (Colinet, "Le livre d'Hermès intitulé 'Liber dabessi' ou 'Liber rebis'", 1032) already quoted similarities between the two of them. In the following paragraphs I aim to develop further the most evident similarities. Some of the similarities listed by Colinet seem indeed too slight to be used as arguments for comparison.

The section *De lapide benedicto* begins with an extract of the *Tabula Smaragdina* from the vulgate version seen above: *Verum sine mendacio. Certum certissimum. Sublima subtile a spisso sua uice cum magno ingenio. Ascendit a terra in celum. Iterum descendit in terram [...]* (f. 104v).<sup>39</sup>

This quotation is introduced by an opening sentence similar to those already seen in the *ratio prima*<sup>40</sup>: *est sicut dixit Hermes*, “it is as Hermes said” (f. 104v). Later in the section, we find also mentioned the sentence: *et Hermes dixit in suo secreto* “and Hermes said in his secret” (f. 106r). In my opinion, these introductory sentences and the ones seen above when quoting the *prima ratio* refer directly to the *Liber dabessi*.

Furthermore, throughout all the sections of the *De lapide benedicto*, we can find other very similar sentences to the *Liber dabessi* as shown in the table below.

[Table 3 here]

The first extract in the table is the most striking. Even if they differ in some details, the recipes of the two texts are very similar. Nevertheless, we must be careful with those quotations of the *De perfecto magisterio*. Since the passage of *De lapide benedicto* is not attested in all the manuscripts, it may have been added later in the *De perfecto magisterio* and therefore not go back to its original composition.

## Conclusion

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<sup>39</sup> Since the Palermo manuscript does not contain the *De lapide benedicto* as part of the *De perfecto magisterio*, I have chosen manuscript London, British Library, Sloane 1754 to quote the extracts of the *De lapide benedicto*.

<sup>40</sup> See above, p. 5.

To sum up, the different elements noticed in this study seem to converge to a unique conclusion: the original language of the *De perfectio magisterio* is Latin. The lack of an Arabic original, the Latin syntax, the absence of rare transcriptions of Arabic technical terms, and the quotations of the *Tabula Smaragdina* in its most diffused version in Latin and of the *Liber dabessi* are several pieces of evidence which suggest this conclusion. These quotations of the *Tabula Smaragdina* and the *Liber dabessi* are the strongest argument in favour of the Latin origin of the treatise since they come from a Latin text of the twelfth century, which in all likelihood appears to date earlier than the *De perfectio magisterio*. The author of the *De perfectio magisterio* may have well known the translations of Arabic treatises, but the treatise itself is not of Arabic origin.

The question of the original written language of the treatise is not the only question raised by the *De perfectio magisterio*. The treatise has not yet revealed all its secrets. Content, more precise dating, influences, or even posterity remain still to be studied. I began the edition of the treatise to fill these gaps and enable further studies about it. This article is a step in that direction.

### **Acknowledgment**

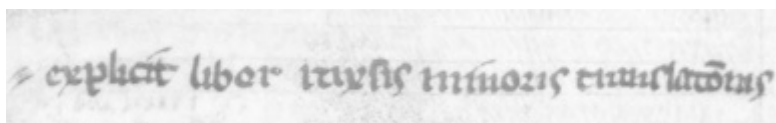
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### **Note on contributor**

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Figure 1



Ms Paris, BNF, lat. 6514, f. 125r.

Table 1

Materials <sup>41</sup>	Instruments
<i>Talch</i> (f. 221r) <sup>42</sup>	<i>Alembic</i> (f. 222v)
<i>Tutia</i> (f. 221r)	<i>Alutel</i> (f. 225v)
<i>Magnesia</i> (f. 221r) <sup>43</sup>	<i>Attanor</i> (f. 225v)
<i>Marcassita</i> (f. 221r)	<i>Cazia</i> (f. 225v)
<i>Elixir</i> (f. 221v)	<i>Botrum</i> <sic> <i>barbatum</i> <sup>44</sup> (f. 226v)
<i>Sal alkali</i> (f. 225r)	
<i>Aluminis iameni</i> (f. 225r)	
<i>Baurac</i> (f. 225v)	
<i>Endanici</i> (f. 229r)	

<sup>41</sup> For a definition of the words in the table, see the glossary presented in S. Moureau, *Le De anima alchimique du pseudo-Avicenne*, vol. 1: *Étude* (Firenze: Sismel – Edizioni del Galluzzo, 2016), 239–334.

<sup>42</sup> The foliotation indicates only the first appearance of the term.

<sup>43</sup> The introduction of the term *magnesia* in the alchemical Latin vocabulary remains unclear. The term is of Greek origin. It appears in Greek in the papyrus of Leyden (recipes 2, 9, 13, 17, 28, 81 in the edition of R. Halleux, *Papyrus de Leyde, Papyrus de Stockholm, Fragments de recettes*, [Paris: Les Belles Lettres, 1981]) and in Latin in the tradition of the *Mappae Clavicula* (recipes 13, 16, 92, 111, 113, 178, 180 in the edition of S. Baroni, G. Pizzigoni and P. Travaglio, *Mappae clavicula: Alle origini dell'alchimia in Occidente. Testo, traduzione, note* [Gennaio: Il Prato, 2014]), a set of recipes directly copied on Greek texts without any Arabic intermediate. But the term also passed in the Arabic tradition before coming back in the Latin vocabulary through it. So, the term *magnesia*, which appears in the *De perfectio magisterio*, can come from Arabic texts as well as from the tradition based on Greek texts.

<sup>44</sup> Corrupted form for *botum barbatum* (cf. Moureau, *Le De anima alchimique du pseudo-Avicenne*, 270–271). The term *botum* can be seen at f. 229r.

Table 2

Extracts from the <i>De perfecto magisterio</i> <sup>45</sup>	Version of the Latin vulgate found in the <i>Liber dabessi</i> <sup>46</sup>	Version translated by Hugues Sanctelliensis <sup>47</sup>	Version translated by Philippe of Tripoli <sup>48</sup>
11) [...] <i>quod erat superius id quod erat inferius</i> [...] (f. 222v).	(1) <i>Verum sine mendacio, certum, certissimum. Quod est superius est sicut quod inferius, et quod inferius est sicut quod est superius, ad praeparanda miracula rei unius, sicut res omnes ab una fuerunt meditatione unius, et sic sunt natae res omnes ab hac re una aptatione.</i>	(1) <i>Superiora de inferioribus, inferiora de superioribus, prodigiorum operatio ex uno, quemadmodum omnia ex uno eodemque ducunt originem, una eademque consilii administratione.</i>	(1) <i>Veritas ita se habet et non est dubium, quod inferiora superioribus et superiora inferioribus respondent. Operator miraculorum unus solus est Deus, a quo descendit omnis operatio mirabilis. Sic omnes res generantur ab una sola substantia, una sua sola dispositione.</i>
6) No introductory word: <i>Nutrix eius terra est</i> [...] (f. 222v).	(2) <i>Pater ejus sol, mater ejus luna. <u>Portavit illuc ventus in</u></i>	(2) <i>Cujus pater sol, mater vero luna. Ea &lt;m&gt; ventus in</i>	(2) <i>Quarum pater est sol, quarum mater est luna. Quae portavit</i>

<sup>45</sup> The numbers in this column indicate the order of apparition of the extracts in the text of the *De perfecto magisterio*. The extracts have been put in the order presented in the *Tabula Smaragdina*. The introductory words of the extract as well as the words which introduce the explanation when there is one, accompany the extract.

<sup>46</sup> J.-M. Mandosio, “La Tabula smaragdina e i suoi commentari medievali”, 691–692.

<sup>47</sup> J.-M. Mandosio, “La Tabula smaragdina e i suoi commentari medievali”, 690–691.

<sup>48</sup> J.-M. Mandosio, “La Tabula smaragdina e i suoi commentari medievali”, 692–693.

<p>Then: <i>id est</i></p> <p>7) Inquit: <u><b>portauit illud uentus in uentre suo</b></u></p> <p>[...] (f. 222v).</p>	<p><u><b>ventre suo. Nutrix ejus terra est.</b></u></p>	<p><i>corpore suo extollit, terra fit dulcior.</i></p>	<p><i>ipsam naturam per auram in utero, terra impregnata est ab ea.</i></p>
<p>1) <i>et hoc dedit Hermes intelligi in suo secreto quod de hoc opere composuit cum ait:</i></p> <p><b><i>Separabis terram ab igne subtile a spisso</i></b></p> <p>[...] (f. 222r).</p> <p>8) Inquit: <u><b>Vis eius integra est si uersa fuerit in terram</b></u> [...]</p> <p>(f. 222v).</p> <p>Then: <i>id est</i></p>	<p>(3) <i>Pater omnis telesmi tocius mundi hic est.</i></p> <p><u><b>Vis ejus integra est. Si uersa fuerit in terram</b></u></p> <p><b><i>separabit terram ab igne, subtile a spisso.</i></b></p>	<p>(3) <i>Vos ergo, praestigiorum filii, prodigiorum opifices, discretionem perfecti, si terra fiat, eam ex igne subtili, qui omnes grossitudine et quod hebes est antecellit, spatiosus, et prudenter et sapientiae industria, educate.</i></p>	<p>(3) <i>Hinc dicitur sol causatorum pater, thesaurus miraculorum, largitor virtutum. Ex igne facta est terra. Separa terrenum ab igneo, quia subtile dignius est grosso, et rarum spisso.</i></p>
<p>5) <i>Et hoc inquit Hermes in hoc prenominate secreto cum dixit: Suauiter et cum magno ingenio ascendit de terra in celum. Iterumque</i></p>	<p>(4) <b><i>Suaviter cum magno ingenio ascendit a terra in coelum. Iterum descendit in terram et recipit vim superiorem atque inferiorem.</i></b></p>	<p>(4) <i>A terra ad coelum conscendet, a coelo ad terram dilabetur, superiorum et inferiorum vim continens atque potentiam.</i></p>	<p>(4) <i>Hoc fit sapienter et discrete. Ascendit enim de terra in coelum, et ruit de coelo in terram. Et inde interficit superiorem et inferiorem virtutem.</i></p>



<p><i>descendit in terram</i></p> <p>[...] (f. 222v).</p> <p>Then: <i>per hoc dedit</i></p> <p><i>intelligi [...]</i></p> <p>9) dixit: <u><i>et recipiet uim</i></u></p> <p><u><i>superiorem atque</i></u></p> <p><u><i>inferiorem</i></u> [...]</p> <p>(f. 222v).</p> <p>Then: <i>id est</i></p>			
<p>2) <i>et Hermes huius</i></p> <p><i>doctrine princeps in ea</i></p> <p><i>quidem scientia in fine</i></p> <p><i>sui prenominati secreti</i></p> <p><i>uolens quomodo ex</i></p> <p><i>quibus lapis que</i></p> <p><i>predixerat: omnem</i></p> <p><i>rem subtilem uincere</i></p> <p><i>et omnem rem solidam</i></p> <p><i>penetrare [...]</i></p> <p>(f. 222r).</p> <p>4) <i>Ita lapis quam</i></p> <p><i>predixi omnem rem</i></p>	<p>(5) <i>Sicque habebis</i></p> <p><i>gloriam claritatis</i></p> <p><i>mundi. Ideo fugiet a te</i></p> <p><i>omnis obscuritas. Hic</i></p> <p><i>est tocius fortitudinis</i></p> <p><i>fortitudo fortis, quia</i></p> <p><i>vincet omnem rem</i></p> <p><i>subtilem, omnemque</i></p> <p><i>rem solidam</i></p> <p><i>penetrabit.</i></p>	<p>(5) <i>Unde omnis ex</i></p> <p><i>eodem illuminatur</i></p> <p><i>obscuritas, cujus</i></p> <p><i>videlicet potentia</i></p> <p><i>quicquid subtile est</i></p> <p><i>transcendit et rem</i></p> <p><i>grossam totum</i></p> <p><i>ingreditur.</i></p>	<p>(5) <i>Sic ergo dominatur</i></p> <p><i>inferioribus et</i></p> <p><i>superioribus, et tu</i></p> <p><i>dominaberis sursum et</i></p> <p><i>deorsum. Tecum enim</i></p> <p><i>est lux luminum, et</i></p> <p><i>propter hoc fugient a te</i></p> <p><i>omnes tenebrae. Virtus</i></p> <p><i>superior vincit omnia.</i></p> <p><i>Omne enim rarum agit</i></p> <p><i>in omne densum.</i></p>

<p><i>subtilem uincere et omnem substantiam solidam penetrare [...]</i> (f. 222r).</p> <p>10) <i>et tunc uincet omnem rem subtilem omnemque rem solidam penetrauit secundum quod ipse dixit [...]</i> (f. 222v).</p>			
<p>3) <i>hoc idem insinuauit cum dixit: hic mundus creatus est [...]</i> (f. 222r). Then: <i>id est</i></p>	<p>(6) <i>Sicut hic mundus creatus est. Hinc erunt aptationes mirabiles quarum mos hic est.</i></p>	<p>(6) <i>Quae quidem operatio secundum maioris mundi compositionem habet subsistere.</i></p>	<p>(6) <i>Et secundum dispositionem maioris mundi currit haec operatio.</i></p>
<p>/</p>	<p>(7) <i>Itaque vocatus sum Hermes, tres totius mundi partes habens sapientiae.</i></p>	<p>(7) <i>Quod uidelicet Hermes philosophus triplicem sapientiam vel triplicem scientiam appellat.</i></p>	<p>(7) <i>Et propter hoc vocatur Hermogenes triplex in philosophia.</i></p>

Table 3

Quotations of the passage called <i>De lapide benedicto</i> in the <i>De perfecto magisterio</i> <sup>49</sup>	Quotations of the <i>Liber dabessi</i> <sup>50</sup>
F. 104v: Occulti lapidis albi recentem quantum uis assume quod subtiliter commisces et molas in uitreata absque omni re alia ibique per diem et noctem fermentari dimittes. Deinde in fimo equi in uase uitreo bene sigillato ita ut non respiret ad inhumandum per tres ebdomodas <sic> dimittatur, ita tamen ut singulis ebdomadis remouetur cenum. Completo numero [...]	P. 51: Accipe lapidem qui vocatur debesi recentem absque re omni alia, quem subtiliter comminues lavabisque perfecte, deinde mittetur in olla ubi nichil aque habeatur et in ollam vitreatam absque re omni alia mittes, ibique per diem et noctem fermentari dimittes. Deinde in fimo equi olla bene cooperta inhumetur, et per tres ebdomadas dimittatur, ita tamen ut singulis ebdomadis renovetur cenum. Completo tandem dierum numero [...]
F. 105r: Et hoc fiet ter post primam inhumationem inhumando distillando [...]	P. 51: Ita facies per tres vices inhumando et distillando [...]
F. 105v: [...] mitte in uentre equi ad inhumandum per 15 dies et 15o die inuenies laminam solitam aqua alba ut lac. Tum mutato fimo de quarto in quartum diem haec est aqua uite completa.	P. 51: [...] Ita diebus 14, fiet tamen quarto in quartum diem fimo mutato. Cum ad 15 dies advenerit, aqua illa similiter colata deorsum reponetur [...]
F. 105v: [...] super quam philosophi omnes	P. 52: [...] super quam omnes philosophi

<sup>49</sup> Extracts from the manuscript London, BL, Sloane 1754.

<sup>50</sup> Extracts from the edition of the text in R. Steele, D. W. Singer, "The Emerald Table", 47–56.

sustentati sunt.	substantati sunt.
F. 106r: Et cum exaltatus fueris super omnes circulos huius mundi [...]	P. 49: Ego qui exaltatus super omnes circulos huius mundi [...]