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The Laboratories of Michael Sendivogius

Locations and Owners

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Zusammenfassung

Bei den Orten, an denen Alchemisten ihre Kunst praktizierten sowie Erfahrung und Wissen bezüglich der Transmutation von Materie erworben, findet sich die gesamte Bandbreite zwischen gut ausgestatteten Laboratorien bishin zu Küchen, die Alchemisten mit ihren Frauen teilten. In vielen Fällen ist es uns unmöglich festzustellen, wo und mitunter selbst ob Autor:innen alchemischer Texte überhaupt praktische Erfahrung im Labor hatten oder ihre Traktate lediglich aus der Lektüre kompilierten. Dieser Beitrag zeigt auf, was wir über die Orte wissen, an denen Michael Sendivogius (1566–1636), einer der einflussreichsten alchemistischen Autoren der Frühen Neuzeit, gearbeitet zu haben scheint. Dazu gehören die Laboratorien seiner royalen (Krakau, Prag, Stuttgart) und patrizischen Förderer (Prag, Krzepice), befreundeter Alchemisten (Leipzig, Jílové/Eulau) sowie solche, die er selbst mietete oder besaß (Cracow, Kravaře, Olomouc/Olmütz). Die Detailliertheit der historischen Überlieferung über die einzelnen dieser Labore variiert von unsicheren Vermutungen bishin zu sehr gut dokumentierter Information. Die Autor:innen haben umfassende neue Forschungen zu zwei dieser Laboratorien (Krakau und Krzepice) angestellt, deren Resultate in diesem Beitrag vorgestellt werden. Allgemein kann geschlussfolgert werden, dass Sendivogius auf eine erfolgreiche Karriere als chymischer Handwerker zurückblicken konnte. Die Verbindung dieser Erfahrung mit akademischen Nachforschungen brachte ihm die Anerkennung und den Nachruhm als Meister der Alchemie ein, als den wir ihn heute kennen.

Schlagwörter: Alchemistenlabor, Michael Sendivogius, Basilius Valentinus, Johann Thölde, Georg Claromontanus

Abstract

The places where alchemists practiced their art, acquiring experience and knowledge of the transformations of matter, varied from well-equipped laboratories to kitchens shared with their wives. In many cases we cannot discover not only where, but also whether a particular author of alchemical texts had any practical experience or just compiled his treatises solely on the basis of his readings. The present paper discusses whatever is known about the locations where Michael Sendivogius (1566–1636), one of the most influential early modern alchemical authors, is known (or suspected) to have worked. They include the laboratories of his royal patrons (Cracow, Prague, Stuttgart), rich noble and patrician supporters (Prague, Krzepice), alchemical friends (Leipzig, Jílové/Eulau), and those rented or owned by himself (Cracow, Kravaře, Olomouc/Olmütz). The amount of details known about them varies from wild guesses to well-documented information. New extensive research was carried out by the authors on two of those laboratories, in Cracow and in Krzepice, and the results are presented here in more detail. The general conclusion is that Sendivogius successfully completed a craftsman's career in chymical technology, which he combined with academic studies and thus reached the status of a well-renowned master alchemist.

Keywords: alchemical laboratory, Michael Sendivogius, Basilius Valentinus, Johann Thölde, Georg Claromontanus

In 1934 Arthur John Hopkins famously proclaimed that alchemy was "a child of Greek philosophy".[1] Nearly a century later Lawrence Principe's synthesis of the current consensus proposes that alchemy actually had not one but two parents: Greek philosophers and Egyptian artisans.[2] The former observed the admirable metamorphoses of metals performed by the latter and tried to explain them in terms of natural philosophy. Some of them concluded that base metals could indeed be changed into noble metals and set out to discover the secret. What they lacked, however, was genuine practical knowledge of laboratory work and thus cursory visits to artisanal workshops or sporadically witnessing complex processes gave rise to centuries of alchemical speculations, ranging from actual attempts at producing the Philosophers' Stone in one's kitchen to mystical visions of cosmic scope. Although alchemy flourished mostly as a textual culture, many of its adherents certainly carried out practical experiments but without proper training in laboratory techniques and full-time experience of how matter behaves, their attempts were destined to appear amateurish and silly to master craftsmen. Therefore, the two cultures – the textual and the manual – continued to coexist without merging or overlapping to any great extent. It was only in the sixteenth century that two major attempts were made to work out a new approach which would make joint use of both traditions of learning for the advancement of alchemy. The first of them was inaugurated by Paracelsus and initially met with an enthusiastic response but eventually proved to be unsuccessful. His arch-critic, Andreas Libavius, outlined a rival proposal, which in many regards set first foundations for modern chemistry. While Paracelsus was a rebel and revolutionary, rejecting all earlier authorities, Libavius applied traditional logic to the systematic construction of the house of chemistry.[3] Both promoted the way of apprenticeship in the craft tradition – with the didactics of "stitch-rip-repeat" until one performs every operation of one's craft with effortless perfection and thus gets the feel and understanding of the instruments and materials one is working with. For Paracelsus this involved serving his apprenticeship as a youth in the mines of Sigmund Füger in Schwaz, as well as later dwelling with miners and metallurgists, seeking out folk healers and distillers of traditional remedies, from whom he learned mythologized secrets of their crafts and took up their cryptic trade terminology.[4] The system of iatrochemistry created by Paracelsus was chaotic, unclear, with numerous internal contradictions, and – perhaps most importantly – founded on irrational assumptions and employing curious 'barbaric' terms which were not further defined. That was the main objection of Libavius, when he fiercely attacked his contemporary

1. Hopkins 1934
2. Principe 2012, 13–14
3. Here in metaphorical sense, but he also designed an ideal laboratory he called domus chemiae which was never built: Hannaway 1986, Newman 1999.
4. Pagel 1958, 10, Newman 1994, 106

Paracelsians and their prophet, in order to separate their 'chemical culture' from that envisaged by himself, as Bruce Moran put it.[5] Libavius did not get artisanal training like Paracelsus, so when he became interested in chymistry, he admitted that as a novice he needed to "perform his apprenticeship", but instead of employing himself in a workshop of a master of the chymical crafts, he decided to "seek out the most learned and become familiar with them by means of letters".[6] The ideal chymist was, in Libavius' view, "a literate and philosophically based craftsman" or, as he called him, the "free artisan".[7] He should "possess only the diligence of the dialectitians, but also the industry of craftsmen, as well as a complete knowledge of nature including medicine". In addition to that, he "must be able to comprehend the secrets of the magi, the prophecies of astrologers, and [...] have the experience of metallurgy and know the techniques of the charcoal burners".[8] Upon enumerating all these and other criteria, Libavius then remarks in despair that it must be impossible to be a perfect chymist.

In spite of such fugacious doubts, Libavius himself approached that ideal closely and in his famous *Alchemia* (1597) systematically catalogued the tools, materials and procedures of chemical technology of the time, thus setting the stage for numerous "perfect chymists" to follow him through self-apprenticeship based on that handbook. However, even before Libavius (and besides Paracelsus) there were "free artisans" or scholars-craftsmen who started with traditional craft education and only afterwards reached out to the liberal arts, natural philosophy and medicine. One prominent example of attaining such status of "master chymist" was a contemporary of Libavius, the influential Polish alchemist Michael Sendivogius (1566–1636). His first published treatise *De lapide philosophorum* (1604) was subtitled *é Naturae fonte, et manuali experientia deprompti* (*acquired from the fount of Nature and manual experience*) and indeed it shows "a complete knowledge of nature", as required by Libavius. Six years later, exactly the same phrase was used as the subtitle of *Tyrocinium chymicum* (*The chymical beginner*, 1610), the first textbook of laboratory techniques, by the French chymist Jean Beguin, who had published the first French edition of Sendivogius' treatise just two years earlier and clearly regarded his work as a practical companion to the Pole's theoretical model of the workings of Nature.[9] From other sources it is known that Sendivogius also practiced medicine, formulated and interpreted prophecies, performed magical feats, and worked for metallurgic industrial ventures – thus fulfilling all the criteria listed by Libavius.[10] His artisanal skills in chymistry were attested

5. Moran 2007
6. Libavius 1595; quoted in translation from: Moran 2007, 37
7. Moran 2007, 42
8. Libavius 1595, 2: 6–7; quoted in translation from: Moran 2007, 42–43
9. Patterson 1937
10. A still useful but outdated monograph on Sendivogius is: Bugaj 1968; for more recent overviews see:

by numerous later witnesses, so there can be no doubt about them. He worked for longer or shorter periods in several laboratories: To look closer at some of them is the purpose of this paper. We concentrate on those about which we found some new source information, while briefly passing over the remaining ones, either researched by others or still awaiting more scholarly attention.

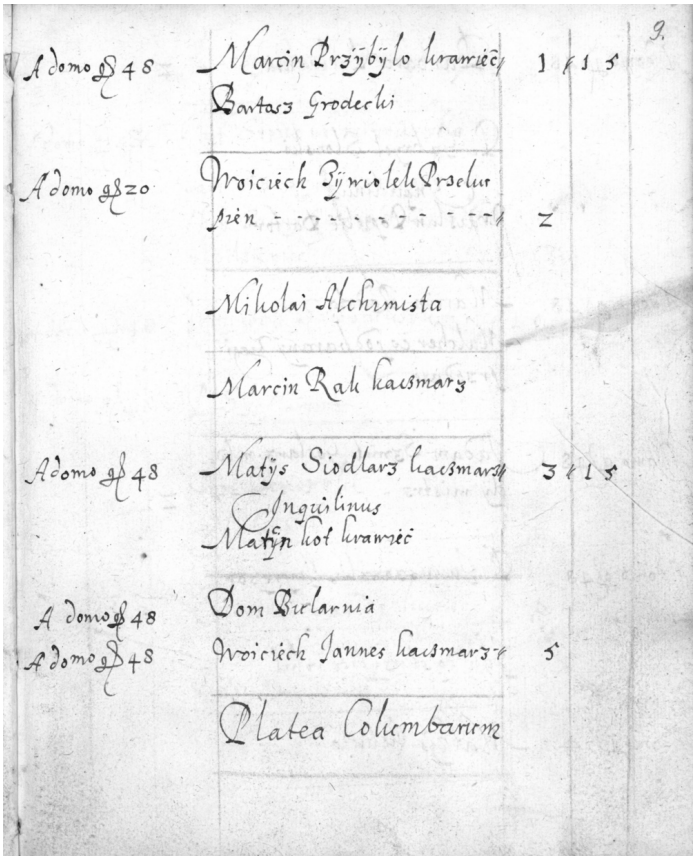

Figure 40.: **The house of Nicolaus Alchimista in Cracow tax records for 1591 (courtesy of Archiwum Narodowe w Krakowie)**

There is no direct evidence available on young Sendivogius's apprenticeship, but he must have served it in Cracow, where he was born on 2 February 1566.[11] The

Prinke 1999, 2010, 2011; details on those criteria are scattered in other papers by R. Prinke, of which we only mention here that on Sendivogius' prophecy, which has been awaiting publication for thirteen years now: Prinke [forthcoming]

11. This date and place were provided as "without any doubt" by Ferdinand B. Mikovec, a Czech playwright and journalist, who unfortunately did not give a reference for this important fact. However, his whole

capital of the Polish-Lithuanian Commonwealth was a large city with several satellite towns (including the Jewish town of Kazimierz) and a great number of craftsmen's workshops. One of them was a professional chymical laboratory, producing various substances for the needs of other artisans and the townspeople. Its owner frequently appears in the municipal records of Cracow, usually just called Nicolaus Alchimista (fig. 40),[12] although his surname was Husman (sometimes spelt Usman, Huszman, Grussman or Grossman).[13] He seems to have arrived in Cracow shortly before 1564, as in that year he bought a house at the corner of Vistula Street, near the Jerusalem Dormitory of the University (*domus acialis […] e regionae bursae Jerusalem*), together with a parcel of empty space by the city walls.[14] Earlier it belonged to Wawrzyniec (Laurentius) Wolborz, whose daughter and heiress Dorota, then wife of Wawrzyniec Podlipień, sold it to "Nicolao Husman Phisico".[15] This designation suggests that he was also a physician and therefore his main preoccupation may have been distilling medicinal herbs or even preparing Paracelsian cures (although it cannot be confirmed by sources). Sometime later Nicolaus Alchimista had another house built next to the city walls (across the narrow street) and apparently purchased two more, so that in 1578 he paid a tax on four houses.[16] It may be assumed that the laboratory was located in the newly constructed house, at his order and perhaps according to a design suggested by him. Such placement was relatively safe in a highly probable case of a fire, which would not spread easily to other houses.

Between 1580 and 1595 Nicolaus Alchimista is mentioned a number of times in the records of *iurati quartalienses*, i. e. the commission of sworn citizens for verifying borders between houses and measuring real property.[17] Most of those records deal with typical arguments between neighbours, but they also indicate that Husman continued to expand his town estate, buying new pieces of ground and building yet another house. In the course of those construction works his cesspit was somewhat damaged and its content leaked through the walls into the cellar of a neighbouring house and into the brewery of another neighbour.

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study on alchemists in Bohemia at the time of Rudolf II (serialised in the journal run by him) contains much reliable and verifiable data. He certainly did some archival research and most probably found a horoscope of Sendivogius, while we know from other sources that the alchemist had a horoscope prepared for him at least on one occasion. Mikovec 1855, 233

12. Archiwum Narodowe w Krakowie (ANK) , Akta miasta Krakowa, Quartale Laniorum anni Domini 1591, sygn. 29/33/2557, 9

13. Our extensive research on him in the municipal records of Cracow builds upon the findings originally published in: Lachs 1909, 147–148

14. Today it is the corner of Karola Olszewskiego and Jagiellońska streets.

15. ANK, Akta miasta Krakowa, Acta scabinalia civitatis Cracoviensis 1564–1569, sygn. 29/33/18, 60–62

16. Grabowski 1852, 298

17. Jelonek-Litewka, Litewka, and Walczy 1998, 43, 164–165, 192, 236, 259–260, 262, 276–277, 289–290, 1999, 120–125

In the deed of his original house purchase of 1564, even though described as a *Physicus*, he was styled *providus*, appropriate for rather poor craftsmen. By 1580 he became *honestus*, but in 1584 was already addressed as *famatus*, indicating a wealthy burgher. In 1589–1590 the official style changed to *egregius*, which was used for educated professionals like lawyers or physicians, and perceiving him as such is additionally highlighted by calling him *Dominus Doctor Nicolaus Alchimista* in a 1590 record. In the same year 1590 he advanced again in the eyes of the city authorities and was styled *excellens*, the highest form for the learned men of outstanding professional accomplishments. Even long after his death (in 1612), his widow appears as one of *excellens Dominus Nicolaus Grossman, Alchimista et Medicinae Doctor*.[18] His academic credentials could not be verified, but it seems quite probable that he had indeed studied medicine before coming to Cracow and establishing his laboratory.

Nicolaus was certainly alive in May 1590, when a minor controversy was being resolved by the City Council and *excellens Nicolai Grusman Alchimista* could not come himself but was represented by Kasper Okurowski Mixta, one of the most illustrious citizens, who became the mayor of Cracow two years later.[19] Most probably Nicolaus was still alive in 1595, when his name appears several times in another case as the owner of the neighbouring house (otherwise his heirs would have been indicated as the owners).[20] It can be assumed that Nicolaus Alchimista died in 1597, since on 6 August of that year his son Samuel appeared at the office of the City Council and claimed some items deposited by his late father in lieu of taxes, including a watch and "weights (*gnichty*) for weighing gold".[21] Then on 16 November of the same year Samuel and his mother Jadwiga, accompanied by their lawyer Kasper Okurowski Mixta, formally took over Nicolaus' inheritance.[22]

Jadwiga, the Alchimista's widow (the Polish word *Alchimiścina* is used in the records), outlived him by almost two decades. After she died, their son Samuel was no longer alive, either, so it was at the request of his daughter Aleksandra and her husband Jan Czuszowski that on 10 May 1615 municipal officials drew up an inventory of all movable property in "*domum lapideam [...] Alchimiścińska ex antiguo appellat"*.[23] The name of the house is a possessive adjective in Polish, indicating that it belonged to *Alchimiścina*. The Czuszowski couple also lodged a protestation against Anna of Czeszkowo, wife of the late Jakub Suchorski, who was merely a step-daughter of Nicolaus Alchimista and thus should not receive any part of his inheritance. The

18. ANK, Akta miasta Krakowa, Acta scabinalia Cracoviensia, 1610–1614, sygn. 29/33/31, 554–555
19. ANK, Akta miasta Krakowa, Acta consularia Cracoviensia, 1589–1590, sygn. 29/33/451, 696–697
20. Jelonek-Litewka, Litewka, and Walczy 1999, 120–125
21. ANK, Akta miasta Krakowa, Acta consularia Cracoviensia, 1594–1597, sygn. 29/33/454, 685
22. Ibid., 739–740
23. ANK , Akta miasta Krakowa, Acta controversiarum officii advocatialis Cracoviensis, 1613–1616, sygn. 29/33/235, 1674–1678

main complaint was that because Anna lived with her mother, she hid most of the valuable property, leaving but a tenth part of it to Aleksandra, the rightful heir. As the city officials testified, many of those valuables and goods were transported to some "lower chambers where, as could be seen, the art of alchemy was practiced" (*mansiones inferiores in quibus uti apparebat exercebatur Alchimistica ars*).

The laboratory of Nicolaus Alchimista was founded two years before Michael Sendivogius was born, so it is justified to assume hypothetically that he must have visited it as a young boy and became fascinated by what he saw there. It is also highly plausible that the future adept served his apprenticeship – whether formally or informally – at the laboratory of Doctor Nicolaus. There is no direct evidence for this, but with later sources Sendivogius can be linked to the place with unquestionable certainty. When he returned from Prague to Cracow in 1605, he lived in that house, *apud Nicolai Doctoris viduam*, for some time, thus enacting the topos of a journeyman's return to his master's workshop.[24] The renowned Polish historian of alchemy Włodzimierz Hubicki stated in two of his papers that Sendivogius actually rented the laboratory from Husman's widow and that there were twenty six pieces of alchemical glass there.[25] Unfortunately, he did not give a source reference, so we may only assume that he had found the text of the rental contract, but in spite of extensive research in the relevant municipal records of Cracow, we have not succeeded in rediscovering that contract. What we did find, however, is the information from real property tax records of 1613 that *Alchimiścina* had "students and children of nobility at her table" and employed a woman-baker, who lived in a room downstairs (fig. 41).[26] Thus it is conceivable that she had run such business earlier and that Sendivogius had been one of those young men who either lived or dined at her house. Even though the name of the future alchemist is not listed in the university roll, we may speculate that he studied informally, which was perhaps arranged by his master Nicolaus (if our apprenticeship hypothesis is correct), who certainly was on friendly terms with some of the professors, running his laboratory next to the university buildings and maybe even teaching some practical aspects of preparing medicines to the students.

At some time in the 1580s Sendivogius set out to complete his journeymanship, travelling to courts and universities in other countries, and presumably visiting chymical laboratories there. Little is known about that period in his life beyond what the Czech poet Jiří Carolides of Karlsperk (1569–1612) wrote in 1598.[27] According to him, the would-be alchemist peregrinated as far as Moscovy, Sweden, England, Spain and

24. Landesarchiv Baden-Württemberg, Abt. Hauptstaatsarchiv Stuttgart, Alchimisten, A 47 Bü 8/6, Drei vom Gericht in Krakau beglaubigten Aussagen über das Geld und den Schmuck den Sendivogius bei sich trug als er nach Württemberg reiste. 1606 Sept.
25. Hubicki 1955, 1969; both reprinted in the posthumous collection of papers: Hubicki 1991, 115, 188
26. ANK , Akta miasta Krakowa, Regestra exactionis regiae seu civilis schoss dictae, sygn. 29/33/2581, 44
27. Carolides z Karlsperka 1598, B1-r

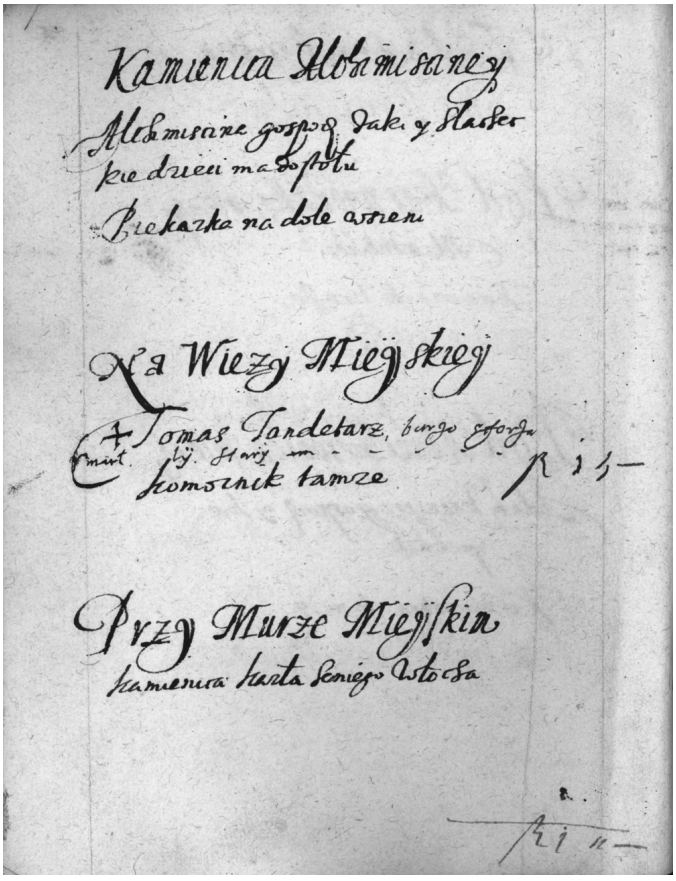


Figure 41.: **The house of Alchimiścina or the widow of Nicolaus Alchimista in tax records for 1613, with a note that she has students and children of nobility at her table (courtesy of Archiwum Narodowe w Krakowie)**

Portugal, in the service of Sigismund III, king of Poland, apparently accompanying royal envoys and gaining early experience in diplomatic service. Then he undertook academic studies at several universities listed by Carolides, of which only in some cases Sendivogius was formally enrolled, while in others he must have just sought out the scholars interested in alchemy and received private instructions. Most interestingly, the list starts with Cambridge, a highly unlikely option, up to being downright impossible for a Roman Catholic from Central Europe to study there. Understandably, with so scarce information, one cannot even speculate on which laboratories Sendivogius may have visited or whom he contacted on matters of alchemy at that time.

The earliest contemporaneous source on Sendivogius is his entry in the roll of Leipzig University students from 1590.[28] According to Friedrich Roth-Scholtz (1687–1736), during his stay in Leipzig the Polish alchemist "lived in close conversation especially with the famous Dr. Joachim Tanckius, as well as with Johann Thölde, a man highly experienced in the chymical art".[29] Although this account was printed almost a century later, Roth-Scholtz was usually very well-informed and critical about his sources. What makes this account seem plausible is the fact that Joachim Tancke (1557–1609) was indeed a professor of the Leipzig University at the time Sendivogius studied there and later edited many alchemical texts, including an early edition of *De lapide philosophorum*.[30] The other close acquaintance he supposedly met in Leipzig in 1590, Johann Thölde (c. 1565–1614), was later a salt manufacturer in Frankenhausen, author of some chymical texts and, most importantly, the creator of the mythical adept Basilius Valentinus, under whose name he published a number of anonymous alchemical texts, edited and partly written by himself.[31] While it is not clear whether Tancke had a laboratory of his own, in the case of Thölde it is quite obvious that he not only tried out alchemical recipes, but conducted systematic chymical laboratory research, which he summarised in the manuscript *Proces Buch*, written for Landgraf Moritz of Hesse-Kassel (1572–1632), started in 1592 and finished on May 18th 1594. It is, therefore, quite plausible that in 1590 he worked with Tancke in or near Leipzig and Sendivogius visited the laboratory there, although nothing is known about Thölde's whereabouts between his studies in Jena in 1583 and the writing of the *Proces Buch*.[32] Thus the identification of that laboratory is not possible unless some new sources are discovered.

When Michael Sendivogius became a courtier of Rudolf II in 1594, he continued his travels, now seemingly as the Emperor's alchemical spy, trying to find someone who would communicate to him the recipe for the Philosophers' Stone.[33] Peregrinating in Germany, the Pole met Edward Kelley and together they returned to Bohemia, where the Englishman had his residence in Jílové (Eulau) near Prague.[34] Kelley owned several houses there and rented one of them to Sendivogius. Although nothing is known about Kelley's laboratory in Jílové, it may be assumed that he had one, especially as he pretended to be an adept and needed a chymical workshop, if only to show it to visiting notables. Sendivogius would certainly be one of such visitors. They may have actually worked together, trying out some processes. After moving

28. Tomkowicz 1882, 437, Erler 1909, 432
29. Sendivogius 1718, 12; „lebete er sonderlich mit dem berühmten Dr. Joachim Tanckio; ingleichen mit dem in der Chymischen Kunst hocherfahrnen Manne/ Johann Thölden, in guter Verständniß."
30. Benzenhöfer 1987
31. Lenz 1981, Humberg 2004, Walter 2011
32. Walter 2011, 16–17
33. Hausenblasová 2002, 276
34. Svátek 1879, 78, 1891, 1:146, 2:52–53

to Prague about 1597, Sendivogius joined the alchemical circle of Ludvík Korálek of Těšín (d. 1599), a rich merchant who had a laboratory in his house "U Hřebene" (At the Haircomb), at the junction of Celetná and Štupartská streets, in which he employed a laborant Martin Štorff. We know for a fact that the Polish alchemist not only visited it, but performed a successful transmutation of iron into silver there, since it is well documented in primary sources.[35]

As can be inferred from the surviving letters of Sendivogius to Rudolf II, during the late 1590s and early 1600s the Polish alchemist showed some chymical operations to the Emperor and promised to teach him the secret process for producing a transmutative oil, which he probably eventually did.[36] These experiments must have taken place in one of Rudolf's laboratories (earlier also frequented by Edward Kelley), the locations of which were identified by Petr Vágner and Ivo Purš, who also discussed some details of their activities, as did Rudolf Werner Soukup.[37] During the same period Sendivogius frequently travelled between Prague and Cracow, where he had very good relations with King Sigismund III and was made his royal secretary in 1600. The king was an amateur goldsmith and also interested in alchemy. His laboratory-workshop was located on the first floor, in the tower next to the private chambers of the king. For some time between 1592 and 1595 it was moved to the former royal sleeping chamber, but then relocated back to the tower. In the sources it was always called "the chamber named Alchimia". Due to a later confusion among historians, the name is now applied to the sleeping chamber.[38] According to some later accounts Sendivogius performed a transmutation before the king and some other witnesses, which must have taken place in the aforementioned laboratory.[39] But even if it is only a legend, there can be no doubt that he discussed alchemy with the king and showed him some chymical processes.

In 1604 Sendivogius was invited by Frederick I, Duke of Württemberg, to visit him in Stuttgart. After corresponding with him for some time, the alchemist arrived at his court in the summer of 1605 and twice performed a successful transmutation of mercury into gold in front of the duke. Frederick was so overjoyed that he granted Sendivogius a land estate and asked him to stay at court and work at his laboratory, but soon the rival alchemist Johann (Hans) Müller von Mühlenfels kidnapped and imprisoned the Pole, who eventually escaped and returned to Cracow in 1606. The laboratory where Sendivogius showed his mastery of alchemy to Duke Frederick was probably that in Altes Lusthaus (Old Summer House), reserved for the duke

35. Teige 1910, 809–815
36. Prinke and Zuber 2018
37. Vágner 1995, 116–120, Purš 2011, Soukup 2011
38. Skowron 1996
39. Borel 1655, 483, 487–488

himself. He may then also have worked in one or both of the other two laboratories (in the New Hospital and Kirchheimer Freihof), intended for visiting alchemists from abroad. Their locations and the laborants working there were researched in detail by Hans-Georg Hofacker.[40]

Back in Poland, Michael Sendivogius was employed by Mikołaj Wolski (1553–1630), the Court Marshal (later Grand Marshal) of Poland and one of the most powerful magnates in the kingdom. He spent his childhood at the imperial court in Vienna and later resided for ten years at Rudolf II's court in Prague. Upon his return, he was granted the royal land estate of Krzepice (as its *starosta* or *capitaneus*), where he rebuilt the castle in Renaissance style, founded a zoological garden, and gathered a valuable collection of art. Wolski was greatly interested in alchemy and often worked together with king Sigismund III in his laboratory, as one chronicler noted.[41] Nicolas Barnaud, who probably met Wolski in Prague, dedicated one of his own texts to him, the *Brevis elucidatio arcani philosophorum*, included in the collection *Triga chemica* (1599). Apart from the search for the Philosophers' Stone, however, alchemy had also a practical dimension for the marshall, who invested in metallurgical industry, buying numerous craftsmen's smithies around Krzepice and improving them with modern equipment, so that eventually he created a centre of metallurgy, with forges, foundries, and two blast furnaces (the first ones in Poland), producing a wide variety of metal merchandize, ranging from simple tools for farmers to cannons and industrial size pans and cauldrons for boiling salt, as well as semi-finished products like wires and metal sheets.[42]

When rebuilding the castle, Wolski arranged an alchemical laboratory there, where he could pursue his alchemical passions, as well as try out new technological solutions for his industrial business. In 1606 he invited Sendivogius, clearly as an expert and master of the chymical craft, to work for him in Krzepice. The alchemist lived there permanently (with possible breaks for foreign travels, including one undertaken in 1610 to Italy) at least until 1612, when he purchased three houses just outside the city walls of Cracow, which he turned into a cottage with a garden and which became his residence until 1625. It was situated near St. Anne's Gate, not far from the laboratory of his (probable) late master Nicolaus Alchimista and close to the University, both on the other side of the walls (fig. 42).[43]

The castle in Krzepice was also visited by other scholars and physicians, who discussed alchemical topics with Wolski and tried out their theories in the laboratory, sometimes leading to fierce conflicts and even serious bodily harm. The same also

40. Hofacker 1993, 28–36
41. Siarczyński 1828, 2:323
42. Pabich 2015
43. Prinke and Follprecht 2017

Figure 42.: **A fragment of the plan of Cracow in 1598 (reconstructed by Kamila Follprecht and Zdzisław Noga), with the laboratory of Nicolaus Alchimista and the later cottage of Michael Sendivogius; the University buildings are in dark pink colour (courtesy of Instytut Historii Polskiej Akademii Nauk)**

happened to Sendivogius, who was attacked by Stanisław Picus Zawadzki, a physician from Cracow, son of the rector of the University,[44] and sued him at the castle court on April 30th 1607, displaying his wounds inflicted "in arce Krzepicensis" to the judges.[45] On August 11th 1610, after returning from Mantua, Sendivogius confirmed at the castle court the receipt of 8600 florins from Mikołaj Wolski, which must have been the payment for his services in Krzepice.[46] Even after moving to his cottage, Sendivogius remained in close contact with Marshal Wolski, as in 1626 the alchemist represented him at the municipal court in Cracow, buying a house at his request.[47]

The castle in Krzepice no longer exists and was already in ruin at the beginning of the nineteenth century. A map from 1702 and some later cartographic sources show it as situated inside a square fortress, but no detailed image of it is extant. About the

44. Lachs 1909, 150
45. ANK , Księgi grodzkie krakowskie, sygn. 29/5/678, 725–726
46. ANK , Księgi grodzkie krakowskie, sygn. 29/5/477, 489; Urban 1986, 73 and fig. 8 (the sum misread as 8000 florins).
47. Tomkowicz 1912, 277–280

middle of the nineteenth century the whole construction was pulled down and only some remnants of the tower and the surrounding walls survived (as depicted on an anonymous watercolour painting from the period), which also disappeared during the next century. Two reconstructions of the castle – from 1938 by Jan Gumowski and from 2007 by Romuald Cieśla – have been criticised for being "fantasies" incompatible with what is otherwise known.[48] Archaeological excavations carried out on the site since 2014 have not uncovered anything that could safely be related to alchemy.

Fortunately, after the death of Mikołaj Wolski, when the estate of Krzepice returned to the king, he ordered to draw up an inventory of it before granting the property to another magnate. It was prepared in 1636 and contains a general description of the castle, including a very brief mention of the alchemical laboratory. The whole structure consisted of three buildings, one of which was the residential manor, another one served mainly for storing wine and other goods, while the third one, situated between them, on the Western side of the fortress square, was the laboratory. The inventory says the following about that building (fig. 43):

> *It has a lower basement with alchemical furnaces. Next to it there are two cellars, one over the other. Above them there are two cellars where alchemical laboratories used to be. On the middle floor there are two small chambers, one vaulted with a chimney. From it [one can reach] a small cellar with a chimney, from which cellar there is an entry to those laboratories. On the higher floor there are two small chambers.*[49]

Although little is known about Sendivogius's activities in Krzepice, the fact that he lived there was widely known, even outside Poland. As late as 1622, the Czech physician Matyáš Borbonius (1566–1629) wrote a letter to his Silesian colleague Georgius Claromontanus or Jerzy Gorecki (incorrectly called Georg Hellberger, c. 1580–1634),[50] who stayed at Wolski's castle at the time. Borbonius asked him about the tincture left by Sendivogius, clearly assuming that the Polish alchemist had been dead (ten years earlier the famous Johann Hartmann of Marburg had written to Borbonius that Sendivogius had died in 1609, of which he claims his Polish friends had informed

48. Gruszecki 1959, Dudak, Herman, and Kobus 2016

49. Archiwum Główne Akt Dawnych w Warszawie, Metryka Koronna, Lustracje 18: Lustratio Bonorum Reipublicae Palatinatuum Cracoviensis et Sandomiriensis 1636, sygn. 4/7/023, f. 64r-65r.; „Ma dolny sklep z pieckami alchimickimi. Wedle tego dwa sklepiki, ieden na drugim. Nad niemi są dwa sklepy gdzie laboratoria alchymickie bywały. Na średnich gmachach dwie izdebce, iedna sklepista z kominem. Z niey sklepik z kominem, z sklepiku iest wschod do tych laboratoryi. Na wyższych gmachach izdebek dwie."

50. All primary sources, including his own surviving letters, use the Polish form of his surname (Gorecki, Goreczki, Goretzky) or the Latin nom de plume Claromontanus. The German version is a re-translation from Latin, never used by the foundation he established (see below). The form "Hellberger" was a guess (or rather translation) given by Karl Schmieder (who had not seen the book and believed it was written in Latin), and then repeated after him by most later authors and bibliographers as being Gorecki's original surname: Schmieder 1832, 206

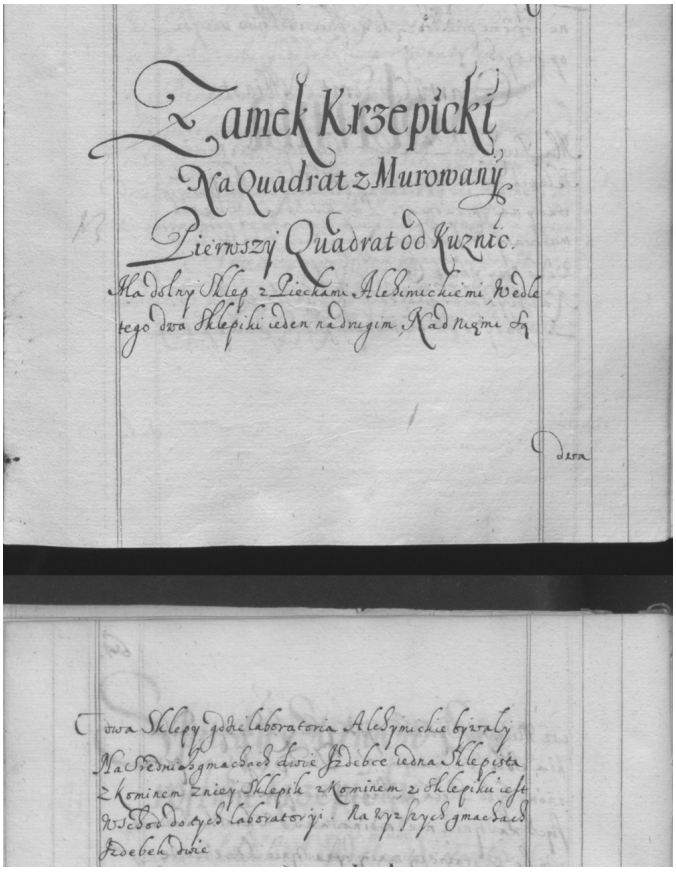
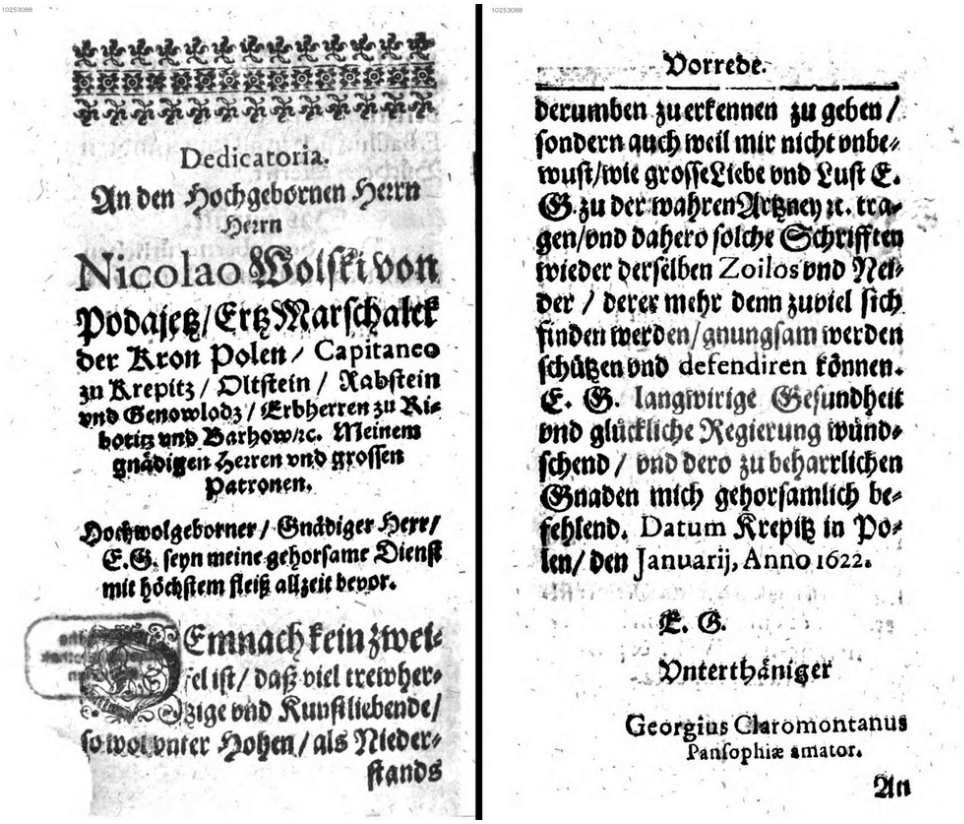


Figure 43.: **Fragment of the inventory of the Krzepice land estate with the description of the alchemical laboratory of Mikołaj Wolski (courtesy of Archiwum Główne Akt Dawnych w Warszawie)**

him).[51] Unfortunately we do not know the full text of the letter nor – which would be even more interesting – the reply from Claromontanus. But there is more to this interesting figure and his possible link to Sendivogius than meets the eye.

In 1626 a book attributed to the mythical Basilius Valentinus was printed in Jena. It was entitled *Letztes Testament und Offenbahrung der himlischen und jrrdischen Geheimnüss so in einem Altar gefunden in fünff Bücher abgetheilet* and instead of the five books

51. Dvořák 1896, 108; „Georgius Crommeromontanus [!], Silesius, medicus apud dnm. Nicolaum s. r. Poloniae mareschalcum Krzepicii [...]Psal sem k němu v příčině Mich. Sendivogii tincturae." (reading corrected by Gellner, 183); Gellner 1938, 114; the form "Crommeromontanus" used by Borbonius may be his mistake or a misreading of both editors.



Dedicatoria.

An den Hochgebornen Herrn Herrn

Nicolao Wolski von Podaſetz/ Ertz Marſchalck der Kron Polen/ Capitaneo zu Krepitz/ Oltſtein/ Rabſtein vnd Genowlodz/ Erbherren zu Riebotitz vnd Barhow/ ꝛc. Meinem gnädigen Herren vnd groſſen Patronen.

Hochwolgeborner/ Gnädiger Herr/ E. G. ſeyn meine gehorſame Dienſt mit höchſtem fleiß allzeit bevor.

Emnach kein zweifel iſt/ daß viel treuherzige vnd Kunſtliebende/ ſo wol vnter Hohen/ als Niederſtands

Vorrede.

derumben zu erkennen zu geben/ ſondern auch weil mir nicht vnbewuſt/ wie groſſe Liebe vnd Luſt E. G. zu der wahren Artzney ꝛc. tragen/ vnd dahero ſolche Schrifften wieder derſelben Zoilos vnd Neider/ derer mehr denn zuviel ſich finden werden/ gnungſam werden ſchützen vnd defendiren können. E. G. langwirige Geſundheit vnd glückliche Regierung wündſchend/ vnd dero zu beharrlichen Gnaden mich gehorſamlich befehlend. Datum Krepitz in Polen/ den Januarij, Anno 1622.

E. G.

Vnterthäniger

Georgius Claromontanus
Panſophiæ amator.

An

Figure 44.: **The first and the last pages of Jerzy Gorecki's 1622 dedicatory preface to Mikołaj Wolski in the first edition of Basilius Valentinus' *Letztes Testament* (1626) (courtesy of Bayerische Staatsbibliothek)**

promised on the title page, contained just two treatises. The book became quite popular and was republished and translated into other languages (including English), but as Johann Thölde, the man behind the Valentinus legend, had already been dead, this publication could not have been the "genuine" part of the corpus.[52] The book was edited by *Georgium Claromontanum Silesium Leznicensem* or the same Jerzy Gorecki of Leśnica (Lesnitz) in Silesia, a friend of Borbonius. What is more, Gorecki dedicated it to Mikołaj Wolski and made it clear that only two treatises were included for the time being. He signed the preface as *Pansophiae amator* in *Krepitz in Polen* and dated it January 1622, so it was ready four years before the publication, in the

52. For the editorial history of Letztes Testament and its place within the corpus of texts ascribed to Basilius Valentinus see: Principe 2019, 558–563; a recently discovered early manuscript version is discussed in: Görmar 2019

same year that Borbonius wrote to him to Krzepice (fig. 44). Although the book was printed in Jena, it bears the imprint of the distinguished publishing house in Wrocław (Breslau), founded by Johann Perfert and in 1609 merged with that of Johann Eyring, when Perfert married his daughter Justina. Both of them had been dead by 1620 and the business was run by their heirs, retaining the names of the two *bibliopolae Vratislavienses*.[53] They had their books printed at numerous Silesian presses, such as Legnica (Liegnitz), Świdnica (Schweidnitz) or Brzeg (Brieg), but also in Leipzig or Frankfurt, so Jena is no surprise.

The text of the first treatise was already recognised by Daniel Georg Morhof in 1674, and more explicitly by Benedikt Nikolaus Petraeus in 1717, as being identical with the book by Nicolas Solea of Bohemia, edited by Elias Montanus of Brzeg and published in 1600 under the title of *Ein Büchlein von dem Bergwergk* (reprinted in Frankfurt in 1618 as *Bergwerckschatz*). There are two versions of it known, one without the place of publication and the other printed in Zerbst, while the publisher is apparently hidden under the initials "D. H. G. H. D.". Because Montanus was a *Leib-Medicus* of the Duke of Anhalt but resided in Brzeg, it may be suspected that the *sine loco* version may have been printed there, especially as the dedication is to Joachim Frederick, Duke of Legnica and Brzeg, his wife Anna Maria of Anhalt, and her younger half-brother August, Duke of Anhalt-Plötzkau. In 1925 Felix Fritz suggested that the second treatise of the *Letztes Testament* was written by the same author, that is Nicolas Solea, which was also accepted by Lawrence Principe.[54] A manuscript of 1612, recently discovered and analysed by Gerhard Görmar, contains three of the promised five treatises, with the same title, the same lengthy foreword, and attribution to Basilius Valentinus.[55] Thus it seems that Jerzy Gorecki cannot be blamed (nor praised) for creating a new item of the pseudoepigraphic corpus, but he must have received the texts in the form he later published.

The identity of Nicolas Solea, the supposed original author, is problematic. In 1922 the eminent Czech historian and bibliographer Čeněk Zíbrt stated in his history of dowsing that Solea's real name was Mikuláš Škorně, but he could not find any biographical details about him.[56] At the end of the last century, two outstanding Czech historians of science included Solea's book in their inventory of the printed works by Prague astronomers of the sixteenth and seventeenth centuries in Czechoslovakian libraries, without further explanations.[57] At about the same time Jost Weyer discovered a manuscript from the library of Count Wolfgang II of Hohenlohe, which has the

53. Benzing 1977, 1127, Kotyńska 2004, 19, no. 2.23
54. Fritz 1925, Principe 2019, 560
55. Görmar 2019
56. Zíbrt 1922, 46–47
57. Horský and Tenorová 1990, 44

same text and title page, including the initials "D. H. G. H. D.", and is signed "N. Solea. Finitus Mense Martio anno 1569 Regiomonti Borussiae".[58] As proposed by Weyer, he may (or may not) have been identical with one Nicolaus Solia, the Lutheran pastor of Altenstein in Thuringia, flourishing in the 1560s and known to have been interested in alchemy.[59] Later authors accepted it with similar reservation, because there are no sources confirming that the pastor was a Bohemian and that he dwelt in Królewiec (Königsberg) in Prussia in 1569.[60] A still different and most recent hypothesis was proposed by Nils Lenke and Nicolas Roudet, who found two records of 1609 in which the alchemical adventurer Nicolaus Ficke (Fik, von Vicken, 1571–after 1647) was called "Nicolaus Vicken de Solaea".[61] The identification is, however, impossible for chronological reasons, if the year 1569 on the newly discovered manuscript (not known to Lenke and Roudet) is correct.

Fortunately, the editor of *Letztes Testament* is not so mysterious, even though he caused (and still causes) much confusion. It was even suggested that "Georgius Claromontanus" was a pseudonym of Elias Montanus, who prepared the 1600 edition of Solea's text.[62] As already mentioned above, however, *Georgius Claromontanus de Monte Gallea* (as he signed himself in Latin in the expanded form) was Jerzy Gorecki, a physician born in Leśnica, a small Silesian town near the famous St. Anne Mountain (St. Annaberg), then known as Góra Chełmska. The house of his parents was actually situated on its slope and thence he formed his Latin name ("Gorecki" likewise comes from the Polish word "góra" meaning "mountain"). He studied medicine in Ingolstadt and Padua, and then practiced in Vienna and Prague, where he was granted the titles of *comes palatinus* and *Caesaris medicus* by Emperor Rudolf II. In 1605 Gorecki moved to Warsaw, having been employed as *medicus cubicularius* by King Sigismund III, from whom he also received the honorary title of *physicus regius*. In 1622, as we know, he was a physician of Mikołaj Wolski in Krzepice. After the marshal's death Gorecki returned to the royal court as a personal physician of King Vladislaus IV and his brother (later king) John Casimir. He died in Warsaw in the summer of 1634, leaving quite substantial wealth.[63] In his, *nomen omen*, last will and testament, Gorecki ordained ten thousand florins for establishing a *collegium* in his native Leśnica, where medicine and theology would be taught (with special emphasis on studying medieval Roman Catholic mystics like Tauler, Ruysbroek, and Herp, enumerated explicitly in the will). The executor of the testament was Cardinal Charles Ferdinand Vasa

58. Weyer 1992, 212
59. Weyer 1992, 284
60. Kühlmann and Telle 2013, 936–938, Newman 2018, 75
61. Lenke and Roudet 2012, 208; for additional details on Ficke and his links to Sendivogius see: Prinke 2017
62. Priesner 2008, 125
63. Czapliński 1959–1960, Głowacki 1968, Urban 1969, Kaczorowski 2000

(1613–1655), the bishop of Wrocław and son of King Sigismund III, but he started arranging things only after nearly twenty years, when the value of the legacy diminished considerably. Thus, instead of the college, he established a foundation to support students from Leśnica with scholarships in 1653.[64] In numerous surviving documents it is called *Fundatio p. m. Georgii Goreczki Trium Regum Poloniae aulici medici de patria Lesnitz oriundi*.[65] At the end of the nineteenth century the "Die von Goretzky-Claramontan'sche Stiftung" had its seat in Nysa (Neisse) and offered 405 Mark annually for three students of medicine or Catholic theology, who were born in Leśnica. If no one applied, then others born in the Duchy of Opole (Oppeln) became eligible, while the sons of the citizens of Nysa were considered in the third place only.[66]

Returning to Michael Sendivogius, there is no source mentioning any laboratory in his cottage in Cracow, nor in the two houses inside the walls that he bought after selling the cottage in 1625 and 1626. Soon afterwards he moved to Prague again, becoming a councilor to Emperor Ferdinand II. Nothing is known about the nature of his services, not even if they were in any way related to alchemy.[67] In 1630, as remuneration for those services, he received from the emperor the land estate of Kravaře and Kouty near Opava, with a small castle surrounded by a wall, as well as a large house in the city of Olomouc (Olmütz).

Again, there is no reliable information about a possible existence of a laboratory in either of those locations. However, shortly after he received that estate, it was inventoried by Rafael Mnišovský of Sebuzín (1580–1644), a member of the court of appeal at Prague Castle and vicetreasurer of the kingdom, with a deep and lifelong interest in alchemy. Mnišovský held long conversations with Sendivogius and later wrote to the emperor that "such fundamentals and power of reason that Sendivogius has, I have never heard nor read" and that "his argumentation embraces all ancient allegories that were ever written, [and] flows from all authors that ever came to light, so that one can see clearly to what aim each [of them] proceeded; [it] confirms all ciphers, manuscripts, all illustrations and hieroglyphs and enigmas that I have seen in all my life, and touches the true origin of all things".[68] He did not mention

64. The fascinating thing is that the foundation operated until 1939, granting scholarships to students from Leśnica. The last beneficiary was a woman, Edith Schwitalla, a daughter of a teacher and organist in Leśnica, who studied medicine in Wrocław in the 1930s.

65. Archival references and editions of some documents can be found in: Kaczorowski 2000

66. Nabyl 1875, 64, Baumgart 1885, 192–193

67. In his earlier publications Rafał Prinke followed the assumption of Roman Bugaj that Sendivogius was employed to organise lead mines near the border of Silesia, but this resulted from misreading a statement in Vita Sendivogii Poloni, which actually referred to lead mines that Sendivogius was supposed to own in Poland: Borel 1655, 475

68. Vienna, Haus-, Hof- und Staatsarchiv, Hausarchiv, Familien-Korrespondenz A, Karton 8, f. 279–84 with confused foliation, here 279v and 282r; see also: Prinke 2016, 222–223

witnessing any practical experiments, so even if Sendivogius had a small laboratory of his own, he did not allow anyone into it.

Our purpose was to survey the laboratories at which Michael Sendivogius learned and worked, as well as those which he just visited to parade his chymical skills. Looking at his career as a standard path of craftsmanship, to which academic scholarship was interpolated, thus creating a 'free artisan' as postulated by Libavius, we have discussed at length the laboratory of Nicolaus Alchimista in Cracow, where Sendivogius most probably served his apprenticeship and received his basic instruction in chymical technology. His journeyman years of wandering and academic studies were only briefly covered, since little is known about the chymical workshops and masters he visited. Once he reached the level of a master he displayed his *Meisterstück* or metallic transmutation to Emperor Rudolf II and possibly also to King Sigismund III. He published a scholarly treatise *De lapide philosophorum*, he became famous around Europe and was employed by Mikołaj Wolski in his laboratory in Krzepice, which we discussed in more detail including information on its link to the mythical Basilius Valentinus, whose *Letztes Testament* was edited there. Finally, a few words were devoted to the last years of Sendivogius in Cracow and then in his castle in Kravaře, when he gained financial independence and enjoyed the status of a past master or expert-sage of alchemy. Such eventual success would not have been possible without his early acquaintance with the basics of laboratory techniques in Cracow and pursuit of academic studies, but most importantly without hard manual work, an acute sense of observation and the drawing of logical conclusions. As the Polish alchemist put it himself, his knowledge was the result of his understanding of the *fons Naturae* obtained through the study of books, combined with his exposition to *manuale experientia* found in laboratory work, thus producing the unique conglomerate required to become a 'free artisan' or perfect alchemist.

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Kamila Follprecht holds a PhD in history and is Vice-Director of the National Archives in Cracow. Her scholarly interests concentrate on the owners and inhabitants of buildings in Cracow from the 16th until the 19th centuries, as well as editing related historical sources. She published several books, for example on the owners of real estate in Cracow in 1655, the houses of Cracow in 1792, the Jewish population of the Cracow voivodship in 1790–1792. She is also a co-author of the historical atlas of Cracow voivodship in the late 16th century published by the Polish Academy of Sciences (2008).

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