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Nizami on Alchemy

Abstract Alchemy, developing in Ancient Egypt and its environs, was formed during the Islamic age as the branch of science and technology, nurturing at the same time mysticism and occultism. The transmutation of base metals into noble metals and attempts to achieve immortality or rejuvenation by an elixir or the philosopher's stone have been expansively reflected in Eastern literature and folklore. Nizami Ganjavi, a prominent representative of the twelfth century Azerbaijani literary school and writing in Persian, often refers to alchemy and alchemists, encompassing various issues. Distinct images of alchemy were rendered in his *Khamsa* poems and other lyrics, moreover, he created multi-faceted alchemical metaphors to describe transformations within humanity.

Keywords: Nizami, Khamsa, alchemy, metal transmutation, immortality, Azerbaijani literary school, metaphor

Introduction

Alchemy, as multicultural science, technology and art, nourishing the passion for changing life for the good, for wealth, happiness and immortality, not to mention its gleam of gold and silver and the mystery of an alchemist's life, has been an appealing and popular theme in literature and art. It has ever been a favourite topic for poets, writers and playwrights, artists and musicians, film and media professionals, as well as historians of science and the arts. It has inspired many interesting works across genres. The ideas connected with alchemy, including obtaining gold and silver from other metals, the search for an elixir of immortality and the philosopher's stone are popular to this day in literary works and various arts, they continue to be a source of inspiration for creative people.

Alchemical activities, the vibrant image of the alchemist, the symbolism used, and alchemy as metaphor have enriched art and literature. Literature, in its turn, has played an important role in ingraining alchemy, and especially the character of the alchemist, in cultural memory.

Attitudes towards alchemists and alchemy in literature have been mixed, ambiguous. Each of their inherent qualities and diversity are reflected in literature, which may be regarded as the mirror of life and hearsays. Considerable space is given to the negative aspects of alchemists, who are portrayed either as swindlers or as ruining their own lives with their passionate fixation on alchemy. This tendency has not disappeared; however, alchemy has gained new strength as

a metaphor of spiritual refinement, and attractive images of alchemy and alchemists have been created.

Literary attitudes towards alchemy and alchemists, in both East and West have undergone changes from time to time. Thus, the alchemist sometimes appears as legend, someone who manages to obtain the elixir, or he is the subject of sharp satire, and fine literature narrating alchemist life, is mostly full of fraudulence and trickery; then again, alchemy is the source of powerful metaphors in works that praise love and religion, purification and perfection. The lives of well-known people somehow bound to alchemy, but not necessarily alchemists themselves, sometimes even critics of the practice, have been magnified by legends representing that they had acquired the secret of the elixir. Stories circulated of their deaths and immortality, experiments they did not conduct, or works they did not write, were attributed to them.

Alchemy is one of the lexicon's multi-faceted words; the alchemy of happiness, alchemy of love, alchemy of beauty, alchemy of words. . . – such expressions are endless. When the essence of an event or notion is felt to be irrational, miraculous, mysterious, unusual in some degree, if there is purgation and purification in the broad sense, ascension from a lower to a higher state, connection between the inner world and the universe, then reference to the word alchemy, or its use as a metaphor, clarifies that event or notion and gives it a certain enchantment; alchemy arrives to help as a bolt from the blue.

The word alchemy is understood as three kinds of effort made by humans in ancient times and the medieval period – mental activity, practical activity, and passionate search: ▽

1. Attempts to achieve immortality or rejuvenation by preparing appropriate drugs or magic substances for this purpose.
2. Metal transmutation. The activity of transmuting base metal into noble metals: gold and silver.
3. Practical scientific alchemy, industrial alchemy, that is the preparation of vitally important and useful substances.

Ideas for realising the desired transmutations via specifically prepared substance, that is al-ixir/elixir, “philosopher’s stone” or special, important matter – quintessence – ruled the mind. In its first and, partly, its second forms, alchemy was full of dark secrets and allegory. Science historians perceived it as legend or myth, in the best case a religious-ethical-mystical view system in its first form (immortality); however, in the second form of alchemy (metal transmutation) the opinions were cleaved.

The subject of alchemy has been studied widely in Western literature and art; many articles and books have been written about it, particularly by Eric J. Holmyard, John Read, Theodore Ziolkowski, Stanton J. Linden, Alexandra Lambert, Elmar Schenkel and Urszula Szulakowska among others.

From Dante (?1265–1321) and Geoffrey Chaucer (?1340–1400) in the fourteenth century to the present, alchemy has appeared repeatedly as a theme in European poetry and fiction. During the Islamic period, alchemy evolved seriously, and related images were prominent in Eastern literature, which, however, conducted no systematic (or even unsystematic) research on the subject.

Alchemy, as a field of science, as well as a mystic occultist activity, spread in medieval Islam, and attracted the time's poets and philosophers. Nevertheless, contrary to Western literature, no specific research in the subject of alchemy has been done, either in Eastern literature of Islamic period or in other literatures. The author of this article attempts to fill this gap, by investigating in particular, the topic of alchemy in Eastern (Middle Eastern) and Russian literature.

In this article, the problem of alchemy and its reflection in Nizami Ganjavi's works has been studied within the broader frame of alchemy in general. Nizami Ganjavi (1141–1209), the most prominent member of the Azerbaijani school of poets writing in Persian in the twelfth century, gives much space to the motif of alchemy in his five epic poems and lyric poetry. The *elixir of immortality* and the *Water of Life* both feature in the legend of Alexander the Great (according to Nizami's *Iskendernameh*). The question of the embodiment of images like Mary the Copt, Hermes and Balinus (Apollonius of Tyana) in Nizami works, who are considered the ancient founders of alchemy, have been discussed.

People accepted the immortality of gods but perceived it as a tragedy not to be immortal themselves; there were always complaints about the impermanence of life. Even though in Christianity and Islam, there is belief in an afterlife, an immaterial immortality of the soul after Judgment Day, humanity's desire for immortality did not diminish, the wish for bodily immortality or to avoid aging (i.e. potential biological immortality) still smouldered in people's hearts.

Different peoples gave different names to substances sought for immortality and rejuvenation. For example, "Ab-i-hayat" (water of life), life-giving water and along with it "Jam-i-Jamshid" (Jamshid's cup), which was full of an immortality-bestowing drink, also used in foretelling, and "Cheshme-i-Gowhar", effervescent spring water from Paradise (a blessed spring) in the Middle East and Central Asia. Let us recall also the "nectar" and "ambrosia" of the ancient Greeks, the beverage and food of the immortals and the gods.

Immortality. The legend of Alexander of Macedonia (by Nizami Ganjavi)

Nizami Ganjavi (1141–1209), Azerbaijani thinker and poet, was born and lived most of his life in Ganja in the twelfth and early thirteenth centuries and wrote five voluminous narrative (epic) poems in Persian, collectively known as the *Khamsa* (“Quintet”); he also wrote lyrical poems. His tomb is in his hometown Ganja, in the present-day Republic of Azerbaijan. Nizami, who is among the giants not only of Persian-writing literature, but of world literature, became popular as the author of poems written in the form of *masnavi*: *The Treasury of Mysteries*, *Khosrow and Shirin*, *Leyli and Majnun*, *The Seven Beauties* (or *The Book of Bahram*), *Iskendernameh* (*The Book of Alexander*) which consists of two parts: *Sherefnameh* and *Iqbalnameh*. These poems became a source of inspiration for Nizami’s successor poets, including famous writers in Persian, Urdu and various Turkic languages, who produced numerous works with the same or similar titles (so-called, “nezire”).¹ Nizami is one of the seven great poets mentioned by Johann Wolfgang von Goethe in his *West – Östlicher Divan* (*West-East Divan*), who says of him that “. . . he chose the most charming exchanges of intimate love as subject matter for his poems”² “A gentle, highly gifted spirit . . . chose for the material of his poems the sweetest encounters of the deepest love”³

Being among the educated elite of his time, Nizami knew the main principles of mathematics and nature studies, he studied mystical knowledge, history and philosophy, as well as Greek, Indian and Islamic philosophy and the cultures of Eastern and Western societies. He was recalled as “sage Nizami” and refers to scientific and philosophical problems of ancient times and of his own era in his works. Nizami is recognised as the foremost representative of the Azerbaijani school of poetry written in Persian and was distinguished for his philosophical mind and strong skill in metaphor. Outstanding for his poetic technique replete

1 Hamlet Isakhanli, “History and Policy of Translating Poetry: Azerbaijan and Its Neighbors” in *Meta*:

Journal des traducteurs, Vol. 59, No. 2, ed. G. L. Bastin (Montreal: Les Presses de l’Université de Montréal: August 2014), 310–329.

2 Johann Wolfgang von Goethe, *West – East Divan. The Poems, with “Notes and Essays”*: *Goethe’s Intercultural Dialogues*. Volume II in the Series: East-West Bridge Builders. Translated by Martin Bédien and Peter Anton von Arnim (New York: State University of New York Press, 2010), 200.

3 Goethe, *West – East Divan. The Poems, with “Notes and Essays”*: *Goethe’s Intercultural Dialogues*, 200.

with allegory, aphorism and homonym, Nizami made room for unique historical facts and events on the one hand and, on the other, focused on his own era and recent past by deliberately employing historical anachronisms.

Great heroes, warlords and kings who conquered and achieved their wild dreams, began also to dream of immortality. The idea of leaving the conquered world behind as a holder of great power and then vanishing forever seemed terrible. The legends about Alexander the Great (356–323 BC) depict his search for immortality. Nizami Ganjavi in his *Iskendernameh* (to the end of its first part – *Sherefnameh* – The Book of Glory) tells the story of Alexander going to the “Land of Darkness” in search of the water of life, following the advice of an “Old Man”:

*Under the North Pole is the black hijab
There flows a spring with protein water
Under a black hijab, called darkness
In the silence, living water flows. (distiches 6446, 6447)^{4,5,6}*

Thus, Alexander with his group follows in the footsteps of “Greenstep/ Greenpace Khizr” (6566) and arrives in “Bolghar”. Then:

*Exactly one month they walked towards the north (line 6478)
[. . .] Reached a place
where you can only dream about the Sun (6481)
[. . .] On the one hand, everything was in darkness
The clarity suddenly disappeared (6484)
The darkness covered the road [. . .] (6487–6488)
Khizr the Prophet walking ahead was his guide (6558).
Finally, Khizr saw a sparkling spring.*

Then:

*If it was a spring, then it was a spring of light (6571)
[. . .] It was a fire as well as the flame. (6576)
[. . .] He drank plenty of the spring’s water*

4 Nizami Ganjavi, *İsgəndərnamə* [Iskendernameh] (Baku: Elm, 1983).

5 Here and in the rest of this article, the excerpts are given in word-for-word or literal translation and are identified by the sequence number of the distiches quoted, a practice inherent in classical literature written in the form of *masnavi*.

6 Nizami used common stories in the Middle East about Alexander. Callisthenes (?360–328 BC), the grandson of Aristotle’s sister, took part in Alexander’s campaigns and left descriptions of those campaigns. Meanwhile, legends about Alexander spread widely from the third century BC (the Alexander Romance); the author of these is known as Pseudo-Callisthenes.

And thus, acquired immortality. (6579)

And ... the spring disappeared ... Khizr was upset and avoided meeting Alexander:

Khizr was quick-witted, understood quickly,

Alexander was deprived of this water.

Caused not by his anger, but by his deprivation

He disappeared as soon as the spring did [...] (6584–6585)

Alexander's desire to find the Water of Life was not fulfilled; it is said: "Who seeks shall find", but the opposite happened:

Alexander was looking for the Water of Life, but failed,

Khizr found the Water of Life, not seeking it. (6624)

There is another story about the search for immortality, says Nizami (6586–6602). Two prophets – Ilyas (Elijah) and Khizr came together and set about their repast near the spring. Accidentally, one of them dropped a salted dried fish into the water, and the fish became alive. They both then drank from the magic spring and became immortal. Ilyas helps those who lose their way at sea and Khizr – on land.

In Sufi poetry or Sufi-like poetry in the Islamic world, glorifying the intrinsic purification of the person and the love of God was the way to reconcile to God, the Sufi way – this way was regarded as the elixir. Nizami's contemporary, the Sufi poet Fariduddin Attar (?1145–?1121) in his book *Mantiqut-Tayr* (The Conference of the Birds), tells the story of a man conversing with Khizr, which emphasises the fundamental difference between them: "You will live forever, 'the waters of immortal life are yours' and I will die" (See: "A Story about Khizr" in Attar).⁷

Nizami's character of the Alchemist Mary the Copt

The information about the alchemist Mary the Copt given by Nizami is also curious. Al-Nadim (second half of the tenth century), in his celebrated book *Kitab al-Fikhris* represents the alchemist Mary as Maria al-Qibtiyya, that is Mary the Copt, and tells of her works. However, this name may confuse the reader. The Prophet Muhammad (?570–632) had a beautiful Coptic wife named

7 Fariduddin Attar, *The Conference of the Birds*. Translated by Afham Darbandi and Dick Davis (London: Penguin, 1984).

Maria Al-Qibtiyya and they had a son Ibrahim, who died at the age of five; Mary died in the year 637.⁸

In *Iqbalnameh*, the second part of the *Iskendernameh* (The Book of Alexander) Nizami Ganjavi wrote a story about Mary the alchemist: “Mary the Copt and Her Chemical Preparations”.⁹ In his account Mary, heir to a Syrian Emir (“There was a Copt woman in Damascus” – 678) had suffered hardship, she was, “worn out by the oppression of ill-wishers (679–680).” She found shelter under Alexander’s (Alexander the Great) rule. Attracted to Aristotle, Mary focused on his teachings and “began to learn science” from Aristotle (686).

*Thus, the woman saw the master was far from lust
Did not show relish for her white body (691)
[...] So, she engaged her proclivity for science. (693)*

Aristotle wanted to give a “treasure” to Mary, who had decided to return to her own country, and thus taught her the secrets of *kimia* (chemistry) and the *ixir* (el-ixir). Mary, returning to her homeland and regaining her strength:

*Was so eloquent in the art of obtaining ixir
That took pure gold from raw silver. (707)*

The gossipers spread the idea that Mary, who possessed unique wealth, was a threat to Alexander’s throne. Aristotle managed to restore the soured relationship between Mary and Alexander.

Hermes, Balinus . . . and Nizami

The Greco-Roman-Syrian, Neo-Pythagorean philosopher Balinus (Pseudo-Apollonius of Tyana), who lived most of his life in the first century (between 40 and 120?) was considered in the Medieval Islamic era as one of the most influential philosophers. A work called *Sirr al-Khaliga* (“The Secret of Creation” or “The Mystery of Creation”), is attributed to him. Jabir, “the father of alchemy”, basing himself on Balinus’s work (while Balinus himself referred to Hermes), was convinced that metals are formed by coupling sulphur and mercury.¹⁰

8 Abu Djafar Muhammad b. Djarir Al-Tabari, *Tarikh al-Rusulwa al-Muluk* [History of the Prophets and Kings], Vol. 8, Translated by Michael Fishbein (New York: SUNY, 1997), 191.

9 Nizami, *İşğəndərnamə* [Iskendernameh], 1983. 463–471.

10 Paul Kraus, *Jabir ibn Hayyan: Contribution à l'Histoire des idées Scientifiques dans l'Islam* [Jabir ibn Hayyan: Contribution to the History of Scientific Ideas in Islam] (Paris: Les Belles Lettres, 1986) 282; William R. Newman, ‘Medieval Alchemy’ in

Apollonius of Tyana (now Kemerhisar, Turkey), is sometimes equated to Hermes and Hermes in turn, according to the Islamic tradition, is identified with prophet Idris – Biblical Enox/Enoch. Idris is one of the prophets also accepted by the Qur'an: "And mention in the Scripture, Enoch (Idris). He was a man of truth and a Prophet",¹¹ "We raised him to a high position".¹² Jabir did not believe in the magic attributed to Balinus; he considered that Balinus was a man of science.¹³

In the *Iqbalnameh*, Nizami assembles seven philosophers of the ancient world around Iskender (for sure, this anachronism – bringing together philosophers of different ages in one meeting – is a deliberate illusion by the poet). Nizami appears to give pre-eminence to Hermes who "has a sharp mind" (955) and "is in the seventh layer" (1468), in other words, in the highest position:

*Before whomeverhe gave a proof,
His words became stronger*

.....
The Greeks envied him. (956–957)

AbúMa`shar al-Balkhí (787–886), who was known as the greatest astronomer and astrologist in the Islamic world, also became famous, as Albumazar or Albuzar, in Europe in the first half of the twelfth century when his works were translated into Latin. According to his *Kitáb al-Ulúf* (Book of Thousands), traditionally there have been *three different Hermes*. The first -the Egyptian Hermes, who founded the sciences of the stars and medicine, was a poet, constructed the first pyramids and temples, laid the foundations of cities and anticipated Earthly disasters – he predicted the Great Flood. The Persians called him Hóshang, which means righteous (in Persian there are various spellings and attributes).¹⁴ In Hebrew he is named Akhnukh/Enoch and in Arabic Idris. The second Hermes was Babylonian; he knew well medicine, philosophy and the nature of numbers; Pythagoras was his disciple. And the third Hermes lived in Egypt, he was a philosopher and physician, wrote a book about poisonous animals and was much travelled. He wrote evaluable book on alchemy – on the combination of precious

Lindeberg, D. C. and Shank, M.H. (eds.) *The Cambridge History of Science*, Vol. 2 (New York: Cambridge University Press, 2013).

11 *The Quran*. Translated to English by Talal A. Itani (USA: ClearQuran, 2012), 19:56.

12 *The Quran*, 19:57.

13 Keven Brown, "HermesTrismegistus and Apollonius of Tyana in the Writings of Bah'u'll'h" in *Revisioing the Sacred: New Perspectives on a Bah'í Theology*, ed. J. A. McLean (Los Angeles: Kalim't Press, 1997), 153–187.

14 Kevin van Bladel, *The Arabic Hermes.From Sage to Prophet of Science* (Oxford University Press, 2009).

stones, glass, glass objects and making fixatives; he had a Syrian student called Asclepios.¹⁵ Hermes the thrice great, that is Hermes Trismegistus, was probably a legendary character combined of these three Hermes.

It seems likely that Nizami used information about Hermes from Abu Mashar's *Kitab al-Uluf*; on the subject of Iskender's horn and long ear, he indicates:

*World philosopher Abu Mashar
In his book "Uluf" says in a different way.¹⁶*

Nizami presents Hermes and Balinus as two separate philosophers. He recalls Balinus' performance of various miracles and refers his claims to be able to fly and to become invisible:

*I can cross the deserts and the seas
I am both Ilyas in the sea and Khidr in the desert.¹⁷*

When Alexander asks his vizier about a fire-breathing dragon, "what is the secret of this mysterious chemistry?" (2857), the vizier answers briefly:

*Such secrets Balinus may know
He is a master of spells and sorcery (2858).*

Balinus was able to tame this dragon who was a beautiful "moon-faced" sorceress:

*He learned all the spells from the girl
That is why he was named Balinus the sorcerer (2892).*

Nizami describes the quest for immortality by his favourite hero, who also praises Balinus's great magical powers and sorcery. Aware of the astrologists' skills and viewing the world realistically, Nizami finally passes judgment on the problem of immortality:

*No matter what you be, magician or astronomer
You will not turn death away from you!(2893).*

Alchemical metaphor in Nizami

Nizami Ganjavi (1141–1209) and the theme of alchemy in his story were mentioned above in connection with Maria of Copt, the alchemist. Herein Nizami pointed out that alchemists used trickery:

15 Bladel, *The Arabic Hermes. From Sage to Prophet of Science*, 125–127.

16 Nizami, *İsgöndərnamə* [Iskendernameh], *Iqbalnameh*, d. 446

17 Nizami, *İsgöndərnamə* [Iskendernameh], *Iqbalnameh*, d. 3477

*Kimya (chemistry) should be in the grip of such a man
Who is not deceived by alchemists.*¹⁸

In addition, (in the same chapter about Mary of Copt), he tells a story on the same theme. He begins the story of the alchemist of Khorasan with an allusion to intercity relations: "The Khorasanis . . . Easily deceive the Baghdadis".^{19,20}

The alchemist, from Khorasan, "showed distinct briskness" in his swindling in Baghdad,²¹ "proving" the transmutation of ordinary gold into pure gold in an experiment, "obtaining ruby red-coloured gold".²² The Caliph sends a lot of gold for purification, the well-prepared alchemist takes the gold and runs away. Nizami indicates the use of a medicinal plant "ginseng" (or rather "*panax ginseng*") in the preparation of an elixir.²³ This plant, which is used in folk medicine, and whose root is reminiscent of a human body, is considered a useful, exceptional plant Chinese medicinal plant "ginseng" (or rather "*panax ginseng*"). In Modern Standard Mandarin: [zə̃n] or [ɹ.ə̃n] or rénshēn, "plant root" refers to the root's characteristic forked shape, which resembles the legs of a person, so the metaphorical meaning take to one's heels, take flight, cut and run.

Moreover, Nizami expressly emphasises that chemistry is connected to science, knowledge and pen:

[. . .] *If the essence of chemistry (here: elixir-H.I.) is in herbs,
The herb of the pen is the essence of chemistry.*²⁴

Nizami created numerous colourful and poetic metaphors using alchemical symbolism in each of his five *masnavis*. I believe that it is hardly possible to find a poet or writer in the East or the West comparable with Nizami for his passion on the subject of alchemy, his references to alchemist stories and his creation of alchemical metaphors.

18 Nizami, *İsgəndərnamə* [Iskendernameh], *Iqbalnameh*, d. 743.

19 Nizami, *İsgəndərnamə* [Iskendernameh], *Iqbalnameh*, d. 746.

20 The meaning of Nizami's words are interpreted by researchers either as Khorasan rulers skilfully deceiving Baghdad's caliphs (Akram Jafar), or as deception by enchantment of the Baghdadis by Khorasanis (Vahid Dastgardi) (*Iqbalnameh*, "Comments and notes"). In my opinion and as mentioned within the narration itself, this is simply about cheating in trade and commercial dealings.

21 Nizami, *İsgəndərnamə* [Iskendernameh], *Iqbalnameh*, d. 770.

22 Nizami, *İsgəndərnamə* [Iskendernameh], *Iqbalnameh*, d. 772.

23 Nizami, *İsgəndərnamə* [Iskendernameh], *Iqbalnameh*, d. 737.

24 Nizami, *İsgəndərnamə* [Iskendernameh], *Iqbalnameh*, d. 741.

When Nizami urges himself and others to be communicative and simple in human relationships, he refers to red sulphur and white ruby as being among the most valuable, inaccessible ingredients that possess the characteristics of an elixir:

*You are neither red sulphur nor white ruby,
For the seeker to return without hope of you.*²⁵

In general, in poetry, including that by Nizami, words such as red sulphur, smelt gold, mercury, chemistry and elixir are, sometimes unconsciously, used interchangeably to refer to very precious substances:

*Cupbearer, bring the smelt gold,
Wherefrom red sulphur is made,
Give it to me to prepare a medicine
and apply chemistry to my copper.*²⁶

Alexander, arriving in Azerbaijan's Barda province, befriends the ruler of "the lucky country, whose water and flora is more precious than any essence or elixir"²⁷ and Nushaba, "who is like a peacock in beauty and is strong-minded, openhearted and sweet in language",²⁸ and orders men to "start a bonfire at the convocation",²⁹ as if an alchemical operation is being performed:

*As the alchemist threw iron into his sphere,
And extracted gold,
The sparks that generate the golden elixir
Plenty of gold was scattered on all sides.*³⁰

Nizami writes about his *Khamsa* in the introduction to the last poem *Iskendernameh* (in the section "About Nizami's disposition towards this epic"), recalling while working on *Iskendernameh*, that Alexander was searching for the Water of Life while alive and could not find it, but that great literature may grant immortality to his hero (Nizami knew well that his works belonged to great literature; he sometimes hinted at it):

*Now in this word-poetry festivity
I'm beating Alexander's fate*

25 Nizami, *İsgöndərnamə* [Iskendernameh], *Sherefnameh*, d. 319.

26 Nizami, *İsgöndərnamə* [Iskendernameh], *Sherefnameh*, d. 4355–4356.

27 Nizami, *İsgöndərnamə* [Iskendernameh], *Sherefnameh*, d. 3416, 3379.

28 Nizami, *İsgöndərnamə* [Iskendernameh], *Sherefnameh*, d. 3367–3368.

29 Nizami, *İsgöndərnamə* [Iskendernameh], *Sherefnameh*, d. 3716.

30 Nizami, *İsgöndərnamə* [Iskendernameh], *Sherefnameh*, d. 3733–3734.

*I'm telling of his happiness and knowledge
 And I praise his throne and crown.
 After so much time
 I bring him back to life with my water of life (807–809).
 [. . .] He searched so long for the fountain of life
 But he has now found what he searched for then. (812)*

In the *Treasury of Mysteries*,³¹ the first book of the *Khamsa*, when stating that commitments to God and religion are superior to temporal values, Nizami measures the value of this commitment by means of an elixir (926–928). The poet, who wrote of the honour of living a simple life and earning a livelihood by his/her own labour, emphasising that the body is temporal and that soul and spirit are essential, that one must be the servant of soul, not body, also recalls the alchemical process of turning copper into silver and gold by stating that “Chemistry is the dyer of copper’s clothing” (1214), and recommends paying heed not to the “black rug of the body” (1215), which shall become “a handful of land that crumbles into dust”, but to the “radiant soul” (1213);

*Only soul, again soul, because the word is in the soul
 Be the servant of your soul to become a sultan.*³²

Nizami likens the idea “purify, if you are not dignified and courageous” to the heat treatment of metals:

*If you are mixed ore, be halal (give in – H.I.) to fire
 If you are gold and ruby, do not be afraid of fire (1882).*

The Byzantine (“Rum”) gold coin was also used in the Islamic world for some time. Nizami also states this and says that Greek gold coin is weighed “even on the scales of love with Damascus stone”, that is with precious Islamic stone. However, Nizami emphasises that this “bright and elegant” (1696) gold can deceive a man and advises steering clear of it:

*Is there a man whose hat was not been stolen by this thief?
 Or was not misled by this devil’s charm? (1697).*

In his *Leyli and Majnun*³³ Nizami explains the reason for Majnun losing his mind to a love for Leyli, over which he moans (in Arabic “Majnun” means a weird, crazy man who can become furious). It is Layla’s extraordinary nature

31 Nizami Ganjavi, *Sirrlər xəzinəsi* [Treasure of mysteries]. (Baku: Elm, 1981).

32 Nizami Ganjavi, *Sirrlər xəzinəsi* [Treasure of mysteries], d. 1214–1216.

33 Nizami Ganjavi, *Leyli and Məcnun* [Leyli and Majnun], (Baku: Elm, 1981).

compared with his own. In a wordplay Leyli is likened to a gold, while he is arsenic (in Persian *zer* and *zernikh* respectively):

*How can arsenic³⁴ be as precious as gold?
A "batman" of that is equal to "mithqal" of this.³⁵*

In a "qasida" (ode), which is thought by some to belong to Nizami, although other specialists dispute that, there is a complaint that "nation and religion are lost" and only the words "like chemistry" remain (here chemistry refers to elixir)³⁶:

*Simiyager, tricky, enchanter fortune
Has created a few bodies with human appearance*

And "because of these immoral people" (in fact, because of this "kmiyager" fortune):

*The nation is gone, religion is lost
"Their mere names have remained, like Chemistry and Phoenix"³⁷*

The word "*simiyager*" (simiyaist, a person who is engaged in Simiya) might at first glance seem to be misspelt for "Kimiyager". In the medieval Islamic world, occult science, the knowledge of objects and occurrences perceived as mystical, was popular, influenced many movements and inspired treatises. Pythagoreanism and Hermetism emanating from the Egyptian-Greek world, alongside Neoplatonist views on soul purification and Ismailism, Batinism and some Sufi movements generated within Islam, strengthened tendencies towards mysticism and magic. Apart from partly occult-oriented *Kimiya*, there were also occult branches of science like Simiya, Limiya, Himiya and Rumiya. *Simiya* – is the science of influencing physical objects by willpower, accessing the ideas and dreams of others; casting spells and sorcery; it was regarded as the purest of the magical sciences.

34 Arsenic refers in Persian to a gold coloured mineral (*zer*), Arsenic 3-Sulphide (As_2S_3) and it assumed that this word came to Persian from the word *alzarniga* in Syriac (in Turkish: *zirnîk*). Arsenicon in Greek, arsenicum in Latin and arsenic in European languages are of the same origin. Used in painting and medicine. A *batman* was equal to several kilograms (1kg – 7kg) depending on the geographical-political location, while a *mithqal* is equal to 4.25 grams.

35 Nizami Ganjavi, *Leyli and Məcnun*[Leyli and Majnun], d. 65.

36 Nizami Gəncəvi, *Lirika*[Lyric].(Bakı: Elm, 1983).

37 Nizami Gəncəvi, *Lirika* [Leyli and Majnun]. d. 95–97.

Nizami, alchemical mercury and colours

Creating metaphors through colours when touching on a variety of topics was one of Nizami's favourite tropes. Alchemy is connected to colours both in their symbolism and the chemistry of colour. *Khosrow and Shirin*, Nizami's inspirational epic-lyrical love poem, is the second book of his *Khamsa*. Highlighting the fact of green turning to black and black turning to red in the question "Why the green willow turns red, after first turning black", the poet deliberates on coal and its combustion. He counterpoises black, in this case the blackness of coal, with the darkness of a mountain crow, an eagle, black snake, Negro, Hindu and Habash (Abissinian, Ethiopian), then he compares reddening during combustion with the flames of Zoroaster (indicating fire-worship), a flint stone and with a compound made by a black Habash secretary from cinnabar and containing mercury (1400–1401).

The blood-red colour of the fiery furnace in *The Seven Beauties* was "like the Zoroastrian reddish sulphur", as if it was "*shangarf* with beaten mercury" (1883, 1885). *Shangarf* or cinnabar is the red-coloured mineral, mercury-sulphide (note that there is also black cinnabar or metacinnabar, depending on the type of crystallization).

Nizami describes frost forming a silver-coloured layer of ice over water as liquid mercury transforming into a solid silver body:

*Mercury of the water glass
Bit by bit turned into pure silver.*³⁸

Nizami makes extensive use of the mysterious nature of mercury, a central element in alchemy, to create a unique metaphor. He suggests that the "Great Creator" "first created the mind"³⁹; he further contemplates the return of the dead, devoured, "stolen" by the soil, a remedy for their entanglement thereunder/inside the soil) with the help of mind, and here (this moment, this case) he recalls the alchemists' process of extracting gold from alloys with the help of mercury:

*No matter how the golden powder is crumbled
A skilful man brings it together with mercury.* (1633)

During the battle between the armies of Khosrow and Bahram the noise was deafening. Nizami reflects this idea in the way that mercury spilled into an ear makes the Earth and a man deaf:

38 Nizami Ganjavi, *YeddiG* "zəl [The Seven Beauties] (Baku: Elm, 1983) d. 1878.

39 Nizami, *İsgəndərnamə* [Iskendernameh], *Iqbalnameh*, d.1601–1602.

*From the neighing of the Arab fire-breathing horses
Mercury has flown to the Earth's ear.⁴⁰*

To some young man who is worried, thinking, "when I get old, my lady-love will run away from me", the wise old man gives solace: "in your old age, you yourself will run from your lady-love" (5202–5204) and thus skilfully embellishes this idea with mercury, reminiscent of both grey hair and escape:

*To this head fate would rain mercury
And run away from silver bodied beauties like mercury⁴¹*

Nizami's Ferdowsi and alchemy

Nizami acknowledged the magnificence of Ferdowsi, the great writer of classical Persian literature; he praised him and openly made extensive use of his *Shahnameh*, its heroes and events. However, he also maintained that it was pointless to repeat Ferdowsi or any other poet and noted that his works were different from the *Shahnameh* in various ways. For example, Nizami's *Khosrow and Shirin* is a great story of love, a significantly different work ("It is no good repeating what has been said before", 476); his praise for love is strong and skilful ("There is nothing more beautiful than love in my world/I wish never to live without love", 478). For Nizami, Ferdowsi did not address love sufficiently in his *Khosrow and Shirin*, part of the *Shahnameh*, due to his predecessor's age at the time of writing ("His arrow had fallen from the bow of youth", 474).

Nizami's comparative alchemical analysis of his own and Ferdowsi's works cannot leave one indifferent. In the *Iskendernameh*, Nizami set himself the particular task of saying what Ferdowsi "the former master of words, ruler of Tus"⁴² did not say. Here, in my opinion, it is worth noting not only the significantly greater length of the *Iskendernameh* (10500 verses) than the story about Alexander in the *Shahnameh* (1261 verses), but also its philosophical character and its idea of a just ruler. Nizami also promised to correct mistakes, including those made by Ferdowsi:

*That venerable decorator
Who erred in the essence
I have amended the wrongly written.⁴³*

40 Nizami Ganjavi, *XosrovvaŞirin* [Khosrow and Shirin] (Baku: Elm, 1981), d. 2190.

41 Nizami, *XosrovvaŞirin* [Khosrow and Shirin], d. 5204–5205.

42 Nizami, *İşgəndərnamə* [Iskendernameh], *Şerefnameh*, d. 493

43 Nizami, *İşgəndərnamə* [Iskendernameh], *Şerefnameh*, d. 6783–6784.

Finally, Nizami states the outcome: a beautiful transformation will take place:

*I cherish roses from yellow soil
and fill the treasury with gems prepared by my inspiration.⁴⁴*

Of course, Nizami is aware that originality is not easily achieved, and requires work:

*It is not possible to find a precious stone easily
The silver extracted from the mine surely needs to be processed⁴⁵*

Nizami emphasises in the *Seven Beauties* the difference between his poem and the way the story is related in the *Shahnameh*: “I have told the untold half of this [book]” (193). The *Seven Beauties* holds the most beautiful and alchemical comparison. Claiming that he is preparing to say the unsaid, Nizami also notes, above all, that it is impossible to avoid repetition in the *Bahramnameh* because it is a historical theme:

*But because there is only one way to the treasure
[And] Although the arrows are two, the target is one.⁴⁶*

And he immediately characterizes the process of transformation from Ferdowsi to Nizami, saying that a woollen rug is good, but silk cloth is more beautiful, that two masters working with the alchemy of the word, forged similar coins that are different in quality; where one (Ferdowsi) transformed copper into silver the other (Nizami) transformed silver into pure gold:

*Although there is no way but to repeat [some things]
I know how to weave silk from rug
The alchemy of word is made up of two decorators (two manners)
Have renewed the old themes -
He made silver from copper, pure silver
And this turned silver into pure gold.
If you see copper changing its quality into silver
Do not be surprised when silver turns into gold (1058–1061).*

Nizami does not forget to forewarn his reader about being exposed to a reverse, top-down transformation, to master something new, the old should be put aside:

*If you want to hear this symbol in another way from me
Then pull out the old cotton from your ears*

44 Nizami, *İsgöndərnamə* [Iskendernameh], *Sherefnameh*, d. 6789.

45 Nizami, *İsgöndərnamə* [Iskendernameh], *Sherefnameh*, d. 518

46 Nizami, *YeddiG* “zəl” [The Seven Beauties], d. 1057.

Not to cover this new silk with a dust sheet.⁴⁷

As a result, Nizami creates a treasure by “chemistry rich in secrets”:

I gathered the selected treasures together
 Also, those sheets that are in disorder.
 From chemistry filled with mystery
 I piled a wonderful treasure trove.⁴⁸

It is appropriate to mention here that Nizami, while expressing some of his own views, loves to topple metaphors on the alchemical transformation process. For example, he wants a ruler to be generous to a poet, he recalls the story of how Ferdowsi’s work was not given the respect it was due, and he wants a proper reception for his own work:

*If we disagree with you
 If we make injustice as in Ferdowsi’s work
 You may put an ice seal on the gold
 And give it to the brewer.⁴⁹*

Or fear may cause big to become small, fire turns to water, while “if the word were gold, it would turn into mercury”.⁵⁰

E.E. Bertels, specifically made a comparative analysis of Ferdowsi’s and Nizami’s works⁵¹ and contemplated the literary subject and its use in a relatively broad manner.⁵²

Ferdowsi and Nizami are both great poets who contributed to enrich world literature. However, the subsequent development of the poetic genre did not follow the *Shahnameh*, but was led by Nizami’s *Khamsa*; narrative love poems, including participation by shahs, rather than glorifications of the shahs, became the leading poetic trends.

47 Nizami, *İsgəndərnamə* [Iskendernameh], *Sherefnameh*, d. 2824–2825.

48 Nizami, *İsgəndərnamə* [Iskendernameh], *Sherefnameh*, d. 2828–2829.

49 Nizami, *Xosrov və Şirin* [Khosrow and Shirin], d. 193–194.

50 Nizami, *Xosrov və Şirin* [Khosrow and Shirin], d. 2483.

51 Yevgeny E. Bertels, *Низами и Фердовси* [Nizami and Ferdowsi] (Baku: Yazıçı, 1981), 127–176.

52 While Bertels translated the “alchemical” transformation from the *Seven Beauties* into Russian, in a line by line literal translation, his version of “The alchemy of word is made up of two decorators (two manners)” was: “Two decorators of word with a philosopher’s stone”. Nizami uses and writes “chemistry”, there is no mention of “philosopher’s stone” in his works.

Conclusion

This research's particularity is in being the first research presentation on Nizami Ganjavi's colourfully rich views on alchemy. The focal point of alchemy – the transmutation of base metals into gold and silver, as well as the problem of obtaining an elixir of immortality, has been highlighted in literature throughout history. Literature in its turn did not remain indebted, but played an important role in fixing the mystical alchemical activity and the image of the alchemist in folk memory.

In literature, particularly in folklore, attempts to obtain medication endowing immortality have been manifested since the most ancient times, for example in the Sumerian *Epic of Gilgamesh*. In his *Iskendernameh*, Nizami narrates the legend of Alexander's quest of immortality. While stating that physical immortality is impossible and, thus, Alexander's effort to find the Water of Life failed, Nizami says that Alexander found immortality in his work, that is, in the *Book of Alexander*. In addition, alchemy and the image of the alchemist engaged in the transmutation of base metals into noble metals, has an important role in Eastern literature.

Since Dante and Chaucer, Western literature emphasised a negative image of the alchemist's machinations and frauds. Well-known writers of successive eras, like Erasmus and Ben Jonson, added new tinges to this negative image. Poets like John Donne and George Herbert approached alchemy as a source of strong metaphor. Nosuch periodical changes of attitudes towards alchemy, from negative to positive, have been encountered in Eastern literature. The creative life of Nizami is a good example. On the one hand, he created a talented and diligent image of an alchemist (Mary the Copt), while he also took up the swindler alchemist from Khorasan. In each of the *Khamisa* poems, Nizami employed various alchemical analogies and produced extraordinary metaphors. Writing on different themes, whether communication, a feast, purification of souls, the threat behind the allure of glittering gold, the clash of colours, senility and activity, or the power of poets, he embellished them with alchemical metaphors. Nizami's contemporary Khaqani (1120–1190) also wrote about alchemy; he did not believe in metal transmutation and listed alchemists among the wretched.

Islamic era Sufi literature is rich in alchemical symbols. The Sufi writeral-Ghazali (1058–1111), the illuminationist philosopher Suhrawardi (1154–1191), Ibn Arabi (1165–1240) and Jalal ad-Din Rumi (1207–1273), often resorted to alchemical metaphor.

The nineteenth century thinker, writer and dramatist M. F. Akhundov (1812–1878) also dedicated one of his well-known comedies – *Hekayəti Molla İbrahim-Xəlil Kimyagər* (1850), written in Azerbaijani Turkish, to the swindler alchemist and the ignoramus who believed in him.

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