

New Perspectives on the Function of Han Dynasty Gold Products with a Focus on the Unearthed Gold from the Tomb of the Marquis of Haihun

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Abstract. This study focuses on the "Mati Jin" among the gold artifacts of ancient China's Han Dynasty, exploring its significant role and profound influence on social culture, economy, and politics. By integrating archaeological discoveries and historical documents, the study aims to understand the form, production, circulation, and cultural significance of "Mati Jin". The research finds that there are distinct differences in form and use between "Mati Jin" and "Lin Zhi Jin", and the production techniques and circulation time of "Mati Jin" span from the Warring States period to the Han Dynasty. Moreover, "Mati Jin" is not only a reward for vassal kings but also has multiple functions such as currency circulation, storage means, and contributions. With the continuous advancement of archaeological technology and the emergence of new discoveries, new perspectives and evidence have been provided for the study of "Mati Jin", promoting a deeper understanding in the academic community.

Keywords: Gold cakes, Mati Jin, Lin Zhi Jin, Han Dynasty currency.

1. Introduction

In the long river of ancient Chinese history, gold and silver artifacts are not only symbols of wealth but also important markers of power, status, and culture. Especially during the Han Dynasty, the craftsmanship of gold and silver wares reached an unprecedented level, and gold and its products were widely circulated as currency in the market. At the same time, some special-shaped gold products, such as Mati Jin and Lin Zhi Jin, with their unique shapes and mysterious uses, have become the focus of academic research. With the continuous advancement of archaeological technology and the emergence of significant discoveries in recent years, especially the excavation of the tomb of the Marquis of Haihun, has unveiled the mysterious veil of Mati Jin and Lin Zhi Jin in the Han Dynasty, providing new perspectives and evidence to re-examine these historical issues.

This paper will sort out the latest unearthed gold products from the tomb of the Marquis of Haihun, select the most distinctive Mati Jin and Lin Zhi Jin products, and focus on the analysis of their shape characteristics and standardized production based on the research of previous scholars; by analyzing the unearthed combination of their conditions, discuss their functions and the political system they reflect.

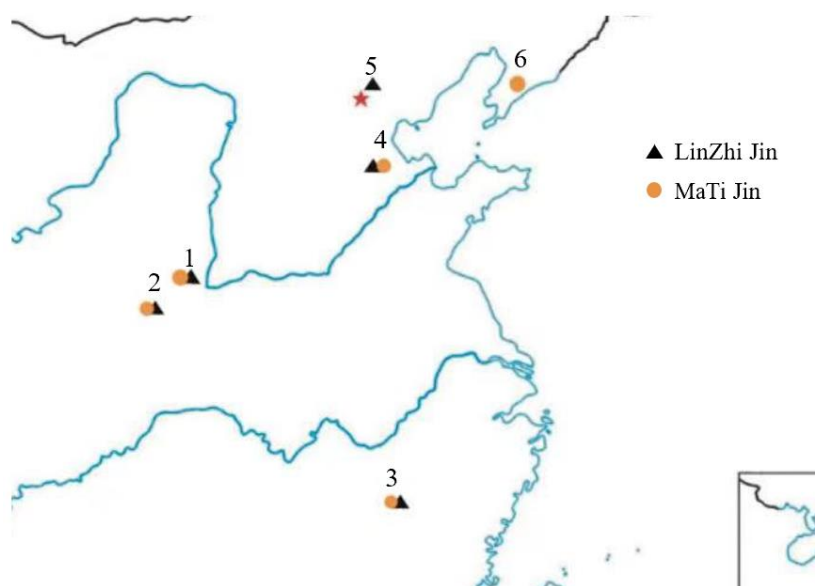
This paper synthesizes and reviews the existing academic research on Mati Jin and Lin Zhi Jin, using methods of literature review and archaeological data analysis, combining the multidisciplinary perspectives of history, archaeology, and cultural studies to conduct a comprehensive analysis of the two. The research scope covers relevant academic discussions and archaeological discoveries from the Han Dynasty to the unearthed objects from the tomb of the Marquis of Haihun, aiming to understand Mati Jin and Lin Zhi Jin in multiple dimensions.

2. Function of Han Dynasty Gold Products

2.1. Standardization of the Production of Mati Jin and Lin Zhi Jin

Up to now, archaeological discoveries have unearthed six sites of Western Han Dynasty Mati Jin and Lin Zhi Jin, with a total number of approximately 81. (Figure 1) These Mati Jin and Lin Zhi Jin

vary in shape and size, and there is no consensus on their naming. A batch of gold artifacts was unearthed from the tomb of the Marquis of Haihun in Jiangxi. Not only are these artifacts numerous and diverse, but they are also well-preserved, greatly enriching the material basis for related research.



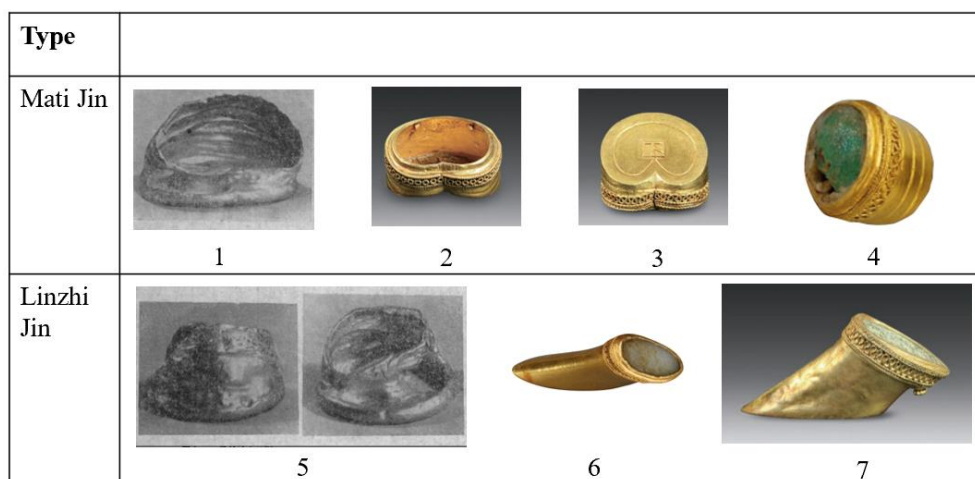
1. Shaanxi Xianyang Maowanggou 2. Shaanxi Xi'an Han Shanglin Yuan site 3. Tomb of the Marquis of Haiyang in Nanchang, Jiangxi 4. No. 40 Han Tomb in Dingxian County, Hebei 5. Huairou County, Beijing 6. Xinjin County, Liaoning

Figure 1. The six unearthed sites of Western Han Dynasty MaTi Jin and Lin Zhi Jin

Image source: <http://bzdt.ch.mnr.gov.cn/browse.html?picId=%224028b0625501ad13015501ad2bfc0009%22>

Mr. Yang Jun, based on the materials unearthed from the tomb of the Marquis of Haihun, has classified the unearthed MaTi Jin and Lin Zhi Jin into the following categories: Type I a "MaTi Jin," three-dimensional, hollow, with an oval base; Type I b "Lin Zhi Jin," three-dimensional, hollow, with a round base, the cavity is larger at the bottom and smaller at the top, and there are patterns on the inner and outer sides of the cavity resembling the natural flow of molten metal. Type II a "Large MaTi Jin," Type II c "small MaTi Jin", and Type II b "Lin Zhi Jin" have gold wire inlay and jade pieces (or glaze pieces) inlaid at the mouth of the cavity [1]. According to this classification standard, the previously discovered MaTi Jin and Lin Zhi Jin can be summarized and classified as follows:

Type I a MaTi Jin was unearthed in Shanglinyuan, Xianyang, Shaanxi, Mao Wang Gully, Xianyang, and Xinjin County, Liaoning; Type I b MaTi Jin was unearthed in Shanglinyuan, Xianyang, Mao Wang Gully, Xianyang, and Huairou District, Beijing; Type II a MaTi Jin was unearthed in Han Tomb No. 40 in Ding County; Type II c small MaTi Jin was unearthed in Han Tomb No. 40 in Ding County and the tomb of the Marquis of Haihun; Type II b Lin Zhi Jin was unearthed in Han Tomb No. 40 in Ding County and the tomb of the Marquis of Haihun. The specific illustrations are shown as follows in Figure 2.



1.Xi'an [Shanglin](#) Yuan Ma Ti Jin Type I 2.Haihun Hou Ma Ti Jin Type II A 3.Haihun Hou Ma Ti Jin Type II C 4.Hebei Ding Xian No. 40 Han Mu Ma Ti Jin Type II C 5.Xi'an [Shanglin](#) Yuan Lin Zhi Jin Type I B 6.Hebei Ding Xian No. 40 Han Mu Lin Zhi Jin Type II B 7.Haihun Hou Lin Zhi Jin Type II B

Figure 2. The specific illustrations of Mati Jin and Lin Zhi Jin

Lin Zhi Jin is generally divided into two categories: Type I b Lin Zhi Jin and Type II b Lin Zhi Jin, with significant differences between these two. As mentioned earlier, except for the Type II b Lin Zhi Jin unearthed from the tomb of the Marquis of Haihun and the No. 40 Han tomb in Ding County, Hebei, the rest of the Type I b Lin Zhi Jin are similar in shape to the Type I am Mati Jin: both are hoof-shaped gold with a wide base and sloping walls that converge upwards. The only difference is that the base of the Type I b Lin Zhi Jin is round, while the base of the Type I am Mati Jin is oval. The Type II b Mati Jin does not resemble a hoof but is more like a slender, pointed boot, with a gold wire inlay decorative band around the mouth of the cavity, and some retain the inlaid jade decorations [2]. There are obvious differences in size, weight, and gold content between Type I b and Type II b Lin Zhi Jin. The Type I b is usually larger, heavier, and has a higher gold content. The Type II b is smaller, lighter, but has a more consistent gold content.

Mati Jin is divided into three types: Type I am, Type II a, and Type II c. The Type I am Mati Jin is an oval hollow gold cake with a slightly concave base, walls that contract upwards, and a large front slope and a smaller rear slope, but slightly concave inward [3]. Its shape data is relatively consistent, with the long diameters of the base ranging from 5.6 to 6.6, short diameters of the base from 4.7 to 6.1, the height of the front wall from 2.8 to 4.9, respectively. The weight varies from 241.9 grams to 284.095 grams, with most weights concentrated around 250 grams. The weight of unearthed Mati Jin and Lin Zhi Jin (after the founding of the People's Republic of China) is shown in Figure 3. According to *The Records of the Grand Historian - Ping Huai Shu*, "one gold is one Jin," which can be corroborated those 250 grams approximately represents "one Jin" (approximately 500 grams) of the Han Dynasty. Some scholars have conducted quantitative surveys and inferred that "the small gold cakes unearthed from the Mancheng Han tombs weigh between 14.2 and 21.5 grams, equivalent to one-sixteenth of a Han Dynasty 'Jin', which should represent the weight of one 'Liang'. A gold cake unearthed in Changsha Tongyinli weighs 138.3 grams, which may represent half a 'Jin' of the Han Dynasty. Some areas have unearthed slightly heavier gold cakes, such as one weighing 312.5 grams in Hengyang Jiangjiashan and another weighing 299 grams in Shouxian Lu Jing, which may be a special phenomenon [4]. After the founding of the People's Republic of China, many artificially cut pieces of Mati Jin were also unearthed, with smaller weights and no fixed pattern, which are speculated to have been cut for convenience in circulation. Although there are variations in weight, most samples are concentrated in a similar range, which may mean that they were used as currency with similar value.

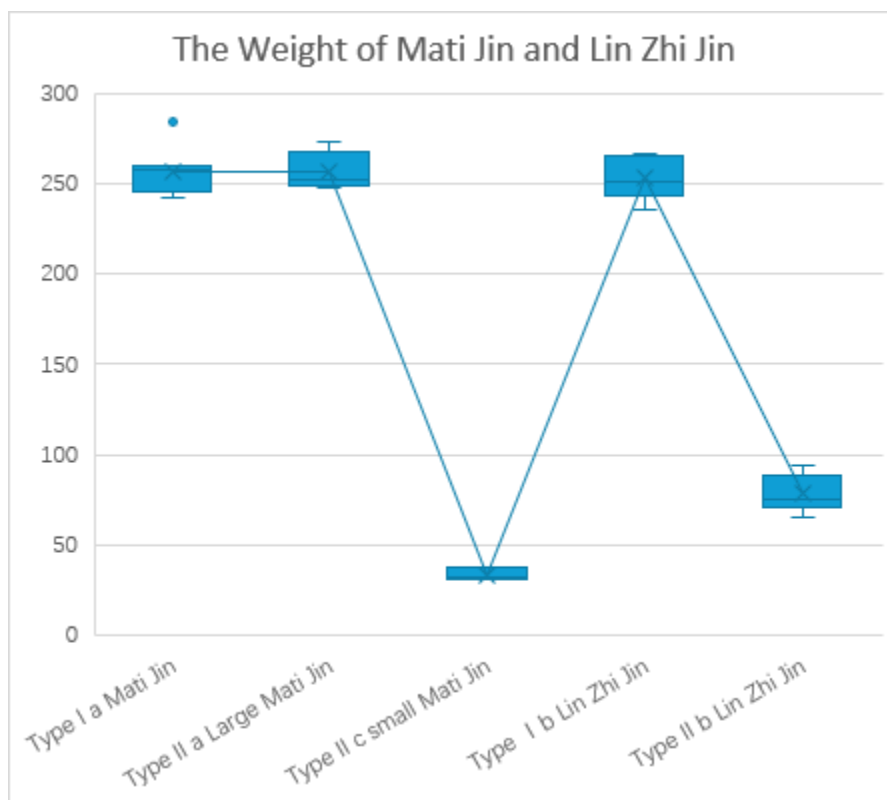


Figure 3. The Weight of Mati Jin and Lin Zhi Jin

The shape and size of the Type II a large Mati Jin are relatively consistent, and the weight is also close. Although the tomb of the Marquis of Haihun and the No. 40 Han tomb in Ding County are far apart in terms of the place of discovery, the shape is basically the same, indicating that these large Mati Jin may have been made in sets by the central government. Their exquisite craftsmanship, with beautiful gold wire inlay patterns at the opening, and the use of expensive gold and jade, indicate that they were used for specific purposes or to represent a certain social status.[5]

The shape, size, and weight of the Type II c small Mati Jin show significant variations in the data, but this is related to whether the inlaid objects are preserved. Some small Mati Jin, due to incomplete preservation of the inlaid objects, weigh significantly less than other Type II c small Mati Jin. However, like the Type II a Mati Jin, the main cavity is polished and smooth, with concave lines on the bottom and sides that imitate the texture of a horse's hoof, which should be made by later manual chiseling and polishing; there is a gold wire inlay decorative band around the mouth of the cavity, which is closely pressed against the outer surface of the Mati Jin and overlapped on it, which should be cast or inlaid on the Mati Jin later; in addition, there are four protruding wedge-shaped tenons distributed approximately diagonally on the inside of the mouth of the cavity. The process should be to punch out wedge-shaped concave pits on the mud core in advance, and form them at the same time when casting the Mati Jin, and their nature should be to support the jade pieces (or glass pieces) covering the mouth of the Mati Jin, which shows that the production cost is high and the process is complex. The production techniques of Type II a Mati Jin and Type II c Mati Jin are very close, and their uses should also be similar. The shape data of the unearthed Mati Jin and Lin Zhi Jin are shown in Table 1.

Table 1. The shape data of the unearthed Mati Jin and Lin Zhi Jin

Type		Shape of the base	Size of the base	Appearance feature	Weight	Others
Mati Jin	I a	Oval	Approximately 6.4*5.2	Barrel-like	Approximately 250g	
	II a	Oval	Approximately 6*5	Barrel-like	Approximately 250g	With inlay
	II c	Oval	2.6*2	Inclined barrel-like	35g	
Lin Zhi Jin	I b	Round	5.3	Boot-like	250g	
	II b	Oval	4.8*1.5	Boot-like	80g	With inlay

In general, the weight of Type I b Lin Zhi Jin and Type I am Mati Jin is around 250 grams, and fragments of these two types of gold cakes have been unearthed, showing signs of being cut. The manufacturing techniques, patterns, and materials used for Type II a and II c Mati Jin and Type II b Lin Zhi Jin are quite similar. Although the shapes and sizes of the three are not uniform, it can be basically considered that there are certain specifications in manufacturing and similarities in use.

2.2. The Co-occurrence of Mati Jin and Lin Zhi Jin in Archaeological Finds

Based on the currently available materials, there are instances where Mati Jin and Lin Zhi Jin have been unearthed together at four sites: Mao Wang Gully in Xianyang, Shaanxi, Shanglinyuan in Xi'an, No. 40 Han Tomb in Ding County, and the tomb of the Marquis of Haihun. An in-depth analysis of this special phenomenon will help to gain a deeper understanding of the function of these special gold products.

According to the historical records in "Book of Han, Volume 6, The Sixth Annals of Emperor Wu," "In the spring of the second year of Tai Shi, I visited the middle region. In March, the decree said: 'The officials discussed and said, 'In the past, when I went out to the suburbs to see the Supreme God, I went west to the summit of Long and obtained a white qilin to offer to the ancestral temple. The Wawa River produced a heavenly horse, and the Tai Mountain saw gold, it is appropriate to change the old name. Now change the gold to Lin Zhi Liao Pian to match the auspiciousness. Therefore, it is distributed and bestowed upon the kings of the feudal states.'" Therefore, the regular use of Mati Jin and Lin Zhi Jin should not be earlier than the second year of Tai Shi during the reign of Emperor Wu of Han (95 BC).

Among the four sites where Mati Jin and Lin Zhi Jin were found together, the No. 40 Han Tomb in Ding County and the tomb of the Marquis of Haihun are both tombs of kings and marquises from the Han Dynasty. Moreover, Liu He, the Marquis of Haihun, died in the third year of the Divine Husbandman of Emperor Xuan of Han (59 BC), and Liu Xiu, the owner of the No. 40 Han Tomb in Ding County, died in the third year of the Five Phoenixes of Emperor Xuan of Han (55 BC), just over thirty years after the second year of Tai Shi of Emperor Wu of Han. Therefore, in terms of time, Type II a Mati Jin, Type II b Lin Zhi Jin, and Type II c small Mati Jin are most consistent with the historical records of Emperor Wu of Han's "Mati Jin" and "Lin Zhi Jin," and are closely related to the feudal enfeoffment system of Emperor Wu of Han.

Mao Wang Gully in Xianyang is a platform within the "Palace of the Six States," containing many coin hoards [6]; Shanglinyuan in Xi'an was the coin minting site during the Han Dynasty. Since the beginning of the Han Dynasty, not only were the values of the coins insufficient, but there were also large differences in weight and size, causing confusion in the exchange of goods in the market. Coupled with the phenomenon of "counterfeiting" and "expensive due to the reason of the object" by the kings of the feudal states and local tyrants, it was very serious. After many repeated attempts, Emperor Wu of Han, under the leadership of Sang Hongyang, finally ended the chaotic situation of the currency system and standardized it. "So, all the counties and states were banned from minting money, and only the three officials of Shanglin were ordered to mint, and it was ordered that the money from the three officials was not allowed to be used throughout the country. All the money

previously minted by the counties and states were all abolished and sold, and the copper was input into the three officials. Since then, the minting right has been returned to the government, and the three officials of Shanglin have been unified in minting. Therefore, there are many types of coins in Shanglin courtyard, but most of them are used for market exchange, such as gold cakes, Type I a Mati Jin, and Type I b Lin Zhi Jin. The unearthed coins are standardized in shape and weight because they are made by the government.

In stark contrast, the Mancheng Han Tomb, which is also a tomb of the kings of the Western Han Dynasty and has not been disturbed by theft, has no Mati Jin and Lin Zhi Jin unearthed. The Mancheng Han Tomb is the tomb of Liu Sheng, the King of Zhongshan during the Western Han Dynasty, and his wife Dou Wan. In the fourth year of Yuan Ding of Emperor Wu of Han (113 BC), Liu Sheng passed away; Dou Wan was buried after the fourth year of Yuan Ding and before the first year of Tai Chu of the Western Han Dynasty, that is, between 113 and 104 BC, all before the decree of Emperor Wu of Han. It can be seen that the decree of the second year of Tai Shi of Emperor Wu of Han was well implemented to a certain extent.

According to the decree of the second year of Tai Shi of Emperor Wu of Han, Mati Jin and Lin Zhi Jin were specially minted during the reign of Emperor Wu of Han in response to auspicious objects, and were used to reward the kings of the feudal states, symbolizing the nobility of imperial power and the appreciation of the nobility.

At the same time, there was a strict system of offering gold during the Western Han Dynasty, which was related to the ancestral temple worship. The ancestral temple worship was an important political activity in the Western Han Dynasty. In addition to participating in the emperor's worship activities in the capital, each county and state also set up county and state ancestral temples. The establishment of the county and state ancestral temples began with the decree of the tenth year of Emperor Gaozu of Han, ordering the kings of the feudal states to "all set up the temple of the Supreme Emperor in the capital," and the subsequent Emperor Hui also "ordered the kings of the counties and states to set up the high temple." After the establishment of the county and state ancestral temples, the kings of the feudal states must have worshipped the ancestral temples, so Emperor Wu of Han awarded the Mati Jin and Lin Zhi Jin to the kings of the feudal states, and the kings of the feudal states used them for the county and state ancestral temple worship, which is completely reasonable. The kings paid a lot of gold cakes as offering gold when participating in the emperor's worship, but at the same time, they could also get the Mati Jin and Lin Zhi Jin used for the county and state ancestral temple worship as a reward from the emperor. This explanation explains the origin of Mati Jin and Lin Zhi Jin in the tomb of the Marquis of Haihun and the No. 40 Han Tomb in Ding County. This interaction between the emperor and the kings of the feudal states not only met the needs of the emperor to collect money but also strengthened their mutual clan identity.

Therefore, the four sites where Mati Jin and Lin Zhi Jin were found together, regardless of their era or the nature of the site, accurately interpret the content required by the decree of the second year of Tai Shi of Emperor Wu of Han: Mati Jin and Lin Zhi Jin unearthed near the capital in Shanglinyuan and Mao Wang Gully may be the objects prepared by the central government of the Western Han Dynasty for the reward of the kings of the feudal states after production; and the relics unearthed in Ding County M40 and the Marquis of Haihun can be confirmed as the rewards received by the kings of the feudal states from the central government of the Han Dynasty.[7]

As for the Mati Jin and Lin Zhi Jin unearthed in the tomb of the Marquis of Haihun, although the tomb owner was buried with the title of Marquis, the special life of the Marquis of Haihun, as well as the special gold products that should have been rewarded to the kings of the feudal states in his tomb, provide more detailed materials for the in-depth study of the function of Mati Jin and Lin Zhi Jin and the reward system of the Han Dynasty.

3. Conclusion

The excavation of the tomb of the Marquis of Haihun has provided new perspectives and evidence for the study of Mati Jin and Lin Zhi Jin. Based on the unearthed artifacts from the tomb, new ideas can be offered to the academic community's long-standing classification of Mati Jin and Lin Zhi Jin, where Mati Jin has an oval base, while Lin Zhi Jin has a round base. For a long time, both Mati Jin and Lin Zhi Jin have served the functions of currency circulation and storage means. The weights of these two types of gold cakes are concentrated in a similar range, indicating that they may have been used as currency of similar value and were cut during circulation for the convenience of transactions.

Among the many unearthed Mati Jin and Lin Zhi Jin, Type II Mati Jin and Type II Lin Zhi Jin, although less in quantity compared to other types, their exquisite wire inlay craftsmanship and inlay techniques suggest that they may have been used to symbolize specific social statuses or specific purposes. In their era, the feudal enfeoffment system during Emperor Wu of Han's period is closely related to the bestowal of these gold artifacts. The centralization of minting rights by the Han Dynasty through currency reform not only strengthened the central fiscal power but also cut off an important source of local fiscal revenue. This weakened the economic strength of the feudal lords, making them unable to contend with the central government. The minting by the three officials of Shanglin indicated the emperor's control over the national currency. The role of Mati Jin and Lin Zhi Jin originates from this. Their use in ancestral temple sacrifices strengthened the clan identity between the emperor and the feudal lords, while also meeting the emperor's need to accumulate wealth.

References

- [1] Yang Jun. An Examination and Comparison of Mati Jin and Lin Zhi Jin. *China Numismatics*. 2017 (03): 3 - 13. DOI: 10.13850/j.cnki.chinum. 2017. 03. 001.
- [2] Xu Chang Qing. *Research on the Cultural Relics Unearthed from the Tomb of Marquis of Haihun*. Beijing. Science Press.
- [3] Yang Jun. A Study on the Types of Cake-shaped Gold Ingots from the Warring States Period to the Han Dynasty. *Journal of National Museum of China*. 2018 (11): 46 - 61.
- [4] Xu Tao. Determining the Weight Value in the Han Dynasty from the Tanjia Gold Cakes. *Archaeology and Cultural Relics*. 2009, (03): 74 - 77. From: https://cwres.ncu.edu.cn/s/net/cnki/kns/G.https/kcms2/article/abstract?v=ZODoBDhYdpccoqFOiY9bQyTAuDNTC43nyKCe8IJWPvKMdmwRdNrei3oFpQKI4zpD5DtItPV6VuXaGvh1Btc7G1uAYsipXlbQnfoI_2dscJj9_pdTbo_Ep5DJ2hfWNeiT3VMP4FDs2lTLyyrKvHSTeT5onrNjcdo7WmG_iO9VeiOR0ls0WpfLNSUAvVlucqLV0LTZgWdc30U=&uniplatform=NZKPT&language=CHS.
- [5] Xu Ning Ning. An Examination and Comparison of Mati Jin and Lin Zhi Jin. *China Numismatics——With a Discussion on the Misconception that Round Gold Cakes are Unicorn Hoof Gold*. *Northern Cultural Relics*. DOI: 10.16422/j.cnki.1001 - 0483. 2019. 02. 007.
- [6] Wang Pi Zhong. Mati Jin and Lin Zhi Jin Unearthed in Xianyang. *Archaeology*. 1980, (04): 378 - 3. From: https://cwres.ncu.edu.cn/s/net/cnki/kns/G.https/kcms2/article/abstract?v=ZODoBDhYdpchMZETs08CaO-1noEirX-z3QVM6Bvd-_KVnR0SL-KgNtM2ra1yuMkkbihVQzbUzMcJkexYsI2hnc5-ep_eRHW7nhpeM_5xqcTgGYbK56ShJNezSDJwgROPk5pytjOmiQ44OJUsDN4fTxoWZ1DoQsJXWpWuvpQIq6G5gU8tRjilhgnJ3DWjQHBB7eGFgOok-MNI36rMSuhI1uIFzpQ8ThEd8k5CQJLY0Q=&uniplatform=NZKPT&language=CHS.
- [7] Zhou Wei Rong, Meng Xiang Wei. A Study of Gold and Gold Currency in Early Ancient China. *Financial View*. 2021, (03): 114 - 124.