

Received: May 2023 Accepted: June 2023

DOI: <https://doi.org/10.58262/ks.v11i02.128>

## Green Packaging and Local Culture: Packaging Design of Jingdezhen Ceramics from a Sustainable Perspective

Mr. Li Ye<sup>1</sup>, Sakchai Sikka<sup>2</sup>

### Abstract

*This study explores the sustainable integration of green packaging and local culture in the packaging design of Jingdezhen ceramics. Against the backdrop of contemporary pursuit of sustainability, green packaging emerges as a pivotal factor for the transformation of the ceramics industry. Through literature review, design analysis, and case studies, this research delves into how to infuse the principles of green packaging into Jingdezhen ceramics packaging design while preserving local culture. The study reveals that by selecting biodegradable materials, reinterpreting traditional patterns, and collaborating with the local community, a win-win situation can be achieved for both environmental conservation and cultural preservation. The results demonstrate that a sustainable perspective on Jingdezhen ceramics packaging design enhances product competitiveness and simultaneously yields positive effects on cultural heritage and environmental consciousness. This research provides valuable insights for the sustainable development of the Jingdezhen ceramics industry and offers inspiration for packaging design of other traditional crafts.*

**Keywords:** Green packaging, local culture, Jingdezhen ceramics, sustainable development, packaging design.

### Introduction

In an era marked by increasing environmental awareness and the pursuit of sustainable development, industries are compelled to adapt and integrate eco-friendly practices into their operations. The ceramics industry, renowned for its craftsmanship and historical significance, stands at the crossroads of this transformation. As consumers' expectations shift towards products that resonate with their ecological values and cultural identities, the packaging design of ceramics becomes a crucial domain where these dual concerns converge.

Jingdezhen, a city steeped in the tradition of ceramics and regarded as the "Porcelain Capital," holds a unique place in Chinese cultural heritage. Its ceramics are not only artifacts of artistic expression but also carriers of local identity and historical continuity. As the ceramics industry grapples with the imperative of sustainable practices, it becomes imperative to investigate how the integration of green packaging principles and the preservation of local culture can shape the packaging design of Jingdezhen ceramics.

This study embarks on a journey to explore the dynamic interplay between green packaging and local culture in the context of Jingdezhen ceramics packaging design. By embracing a sustainable perspective, the aim is to unravel innovative approaches that harmonize ecological responsibility and cultural significance. Through a combination of literature review, design analysis, and case studies, this research seeks to unearth strategies for seamlessly blending green packaging practices with the essence of Jingdezhen's cultural heritage.

This introduction sets the stage for a comprehensive investigation into the intersections of green packaging, local culture, and sustainability within the realm of Jingdezhen ceramics packaging design. By delving into the intricate relationship between these elements, this study aspires to contribute to the knowledge base of

---

<sup>1</sup> Ph.D. Fine and Applied Arts Research and Creation, Mahasarakham University, CHINA. Email: 328782761@qq.com.

<sup>2</sup> Assoc. Prof.Dr. Mahasarakham University, Thailand

sustainable design practices and cultural preservation, fostering a holistic understanding of how to create packaging that resonates with the values of both the environment and local identity.

## Research Objectives

The aim of this study is to investigate, from a perspective of sustainable development, how to integrate the principles of green packaging and local culture into the packaging design of Jingdezhen ceramics, achieving the dual objectives of environmental conservation and cultural heritage.

Through the application of green packaging principles, this study explores how to incorporate eco-friendly materials, design methodologies, and technologies into the packaging design of Jingdezhen ceramics, with the goal of reducing environmental impact and promoting sustainable development.

Analyzing the significance of local culture within Jingdezhen ceramics, the research delves into methods of conveying and celebrating these cultural elements through packaging design. The intention is to enhance the regional distinctiveness and uniqueness of the products.

Investigating the fusion of green packaging and local culture to achieve environmentally friendly packaging while preserving the essence of traditional culture. This study aims to provide innovative solutions for the sustainable development of the Jingdezhen ceramics industry.

Exploring how the integration of green packaging and local culture can bolster the market competitiveness of Jingdezhen ceramic products, attracting consumers who value both environmental consciousness and cultural richness.

In summary, the research objectives are centered on an in-depth exploration of the amalgamation of green packaging and local culture. This endeavor aims to facilitate sustainable development in Jingdezhen ceramics packaging design while achieving synergistic outcomes in the realms of environmental conservation and cultural heritage.

## History of Jingdezhen Ceramics

Jingdezhen has a very long history of porcelain production. According to the records in the Qing Dynasty's "Fuliang County Records", "Xinping smelting pottery began in the Han Dynasty", and it is believed that Jingdezhen has only made ceramics since the Han Dynasty. The mature period of Jingdezhen ceramic production began in the Tang Dynasty, when the porcelain products were very exquisite and were known as "fake jade articles". According to the Qing Dynasty's "Fuliang County Records", "In the fourth year of Wude (621), there were people who carried porcelain into the customs, called fake jade articles, and presented them to the court, so Zhaozhong Elementary School and jade wares entered the imperial palace". (Guoqing Cao, Xiao Fang, 1988) It can be seen that in the Tang Dynasty, Jingdezhen's ceramic craft had a high technical attainments, but the real prosperity in quality and scale began in the Song Dynasty. Since the Song Dynasty, Jingdezhen has become an important production base of porcelain. Song Zhenzong also gave its own year number "Jingdezhen" to this porcelain production area, and stipulated that the word "Jingdezhen year system" must be written at the bottom of porcelain products as the bottom payment. Since then, Jingdezhen has been associated with China porcelain. The Song Dynasty was the glorious period of Jingdezhen's ceramic production, and the porcelain production in the whole country was very prosperous. The celadon and white porcelain produced had high artistic taste and historical value, and it was also the historical starting point of Jingdezhen as an important and well-known porcelain producing area in China. At the same time, celadon based on celadon porcelain-making skills is the biggest highlight of porcelain in Song Dynasty. It is an innovative variety of celadon. It was successfully fired in the middle of Northern Song Dynasty and mass-produced in Southern Song Dynasty, which has a far-reaching impact on later generations. (Fei Gao, 2020) The porcelain colors produced in Jingdezhen in the Yuan Dynasty were mainly blue and white and underglaze red, but "Yuan Blue and White" was the most famous. The shapes of blue-and-white porcelain wares in Yuan

Dynasty are mainly large pieces, including large porcelain plates, large porcelain pots, large gourd bottles, large plum bottles, Gao Zuwan, etc. These blue-and-white porcelain wares have a great influence on later generations, and the blue-and-white porcelain preserved or unearthed in the world is extremely precious, and individual varieties can almost be described as "priceless". During the Ming and Qing Dynasties, Jingdezhen's ceramic production became more perfect and became an important production base for court porcelain. The Ming Dynasty is the beginning of the grand stage of Jingdezhen porcelain production since ancient times. The porcelain-making technology and porcelain varieties are more superb and varied than those of previous dynasties. The Jingdezhen Imperial Kiln Factory, which specializes in making porcelain for the imperial court, was established in the Ming Dynasty. Yongle and Xuande blue-and-white porcelain in Ming Dynasty, Chenghua Doucai porcelain, Jiajing and Wanli multicolored porcelain, etc. are among the finest porcelain products. Zheng He sold a large number of Jingdezhen porcelain overseas in Ming Dynasty, which had a great influence on Jingdezhen porcelain at that time and later. Jingdezhen porcelain was the peak of the development of ancient ceramics in China during the Qing Dynasty. (Legeng Zhu, 2012) In the Qing Dynasty, the imperial court had a special pottery supervisor who was full-time in Jingdezhen porcelain production. The establishment of the pottery supervisor system in Jingdezhen made Jingdezhen porcelain almost reach its peak. By the time of the Republic of China, due to the long-term war and social instability, Jingdezhen's ceramic production was seriously hindered, but ceramic technology and production management were still advancing in difficulties. Although the society is unstable, some outstanding ceramic talents have emerged in the ceramic industry, such as the famous Eight Friends of Zhushan in Jingdezhen. But on the whole, the whole ceramic industry is depressed by the factors of war after all. (Na Li., 2013:1) After the founding of the People's Republic of China, the establishment of the state-owned Jingdezhen Jianguo Porcelain Company was completed, and the production of ceramic products was started, and the original ceramic enterprises were socialist transformed to realize cooperation and public-private partnership. By delving into the history of Jingdezhen ceramics, we have compiled representative ceramic works from different historical periods, as shown in Figure 1. This forms the foundation for incorporating local culture into ceramic packaging design in the subsequent stages.

**Figure 1:** Representative Works of Jingdezhen Ceramics History



## History of packaging development in Jingdezhen

For the time when Jingdezhen ceramic packaging really started, many records are slightly explained. According to Yuan Jiangqi's *Tao Ji Lue*, the "piece" used in it refers to the height, size and capacity of ceramic products, which represents the quantifier of modern Jingdezhen porcelain packaging as a whole. "Furniture" represents the formal formation of ceramic packaging tools, so it can be found from the literature that Jingdezhen ceramic packaging has been formed independently since the Yuan Dynasty. (Wenli Tang, 2012) In the book *"A Brief Introduction to Shima"*, it is roughly recorded that ceramic pots are filled with water, rice, kimchi and cereal. Because of the long distance of transportation at that time, the storage space of the cabin itself was very limited. In order to maximize the utilization of commodity storage, packaging and design, the transported ceramic pots were used as packaging and packaged. Later, in 1720, China porcelain was shipped by the Essex freighter. Generally, ceramic packaging was about 600 pieces per package, weighing about 500 pounds. Although the profit of ceramic goods is low, it is easy to keep the balance of the ship when it is loaded with other foreign trade goods, including ceramics at the bottom, tea on the top and silk on the top. (Dayuan Wang, 1981) This is an early and relatively detailed record of the transportation process of ceramic packaging. Although these ceramic packaging methods are very simple, they have been used for a long time. During the Wanli period of the Ming Dynasty, it was recorded in the historical materials in detail that "after buying ceramics, sand and a little bean wheat were first included in the ceramics, and dozens of them were tied and tied into a whole, and then placed in the wetland and sprinkled with water, so that the bean sprouts sprouted, wrapped and solidified, and then they were thrown on the ground without being damaged before getting on the bus." This is the earliest method to record the transportation of ceramics in detail. Using this method can effectively reduce the damage and loss of ceramics caused by turbulence during the transportation of ships at sea. Of course, the cost of packaging with this method is dozens of times as much as that of ordinary packaging, so this kind of ceramic packaging is so firm that the ceramics salvaged from the sea by archaeologists are very complete and without defects. Jingdezhen in Qianlong period of Qing Dynasty can be divided into coarse porcelain and fine porcelain. These two kinds of porcelain can be roughly understood as superior porcelain and inferior porcelain in ceramic varieties. According to the literature *"Tao Shuo"*, it is mentioned that the output of paper making in Jiangxi in the Qing Dynasty ranked first in China, and the raw materials can be roughly divided into retting paper, cotton paper and bamboo paper, and then divided into coarse paper and fine paper in quality. (Yan Zhu, 1984) Most of the coarse paper is used for packaging or making firecrackers, paper media and ghost paper. In addition, the coarse paper of this period can be used to package better ceramics, and then the porcelain wrapped in paper can be put into wooden barrels. At that time, the medium-sized ceramics were wrapped with grass and put into wooden barrels, and then the inferior ceramics were wrapped with grass, which was cheaper and common at that time, while the outside was wrapped with bamboo. According to the classification of ceramics, the packaging of ceramics is also treated in different grades. Jingdezhen in the Qing Dynasty also specially classified ceramics into two categories, namely "burial utensils" and "round utensils" after molding utensils, such as bowls, plates and saucers. Such as cans, bottles, pots, candlesticks and rainbows, are collectively called burial vessels. There is a very detailed record in the document *"Jingdezhen Ceramic History Draft"*. In the early Qing Dynasty, the transportation of ceramics was mainly by water, and the ceramics were mainly packed in wooden barrels, which were very ideal containers for transporting large pieces of ceramics because of their strong pressure resistance and large capacity. Jingdezhen in the Republic of China was influenced by the political environment at that time, and the packaging of ceramic industry mainly continued the packaging process of ceramics before the Qing Dynasty, without much innovation and improvement. "In the seventeenth year of the Republic of China, there were more than 140 households in the town with a total of 2,000 workers. At that time, Jingdezhen's ceramic packaging materials were divided into three categories: straw packaging, cypress packaging and bamboo basket packaging." (Institute of Ceramics, Jiangxi Provincial Department of Light Industry, 1950) Using straw to package ceramics is the cheapest and most practical ceramic packaging method in Jingdezhen for thousands of years. At that time, the term of ceramic packaging industry liked to be called rhombohedra packaging. When using rhombohedra

packaging operation, straw was packaged and bound with different kinds of ceramics in different proportions. Then, the ceramics are tied up with bamboo seeds, and then, in order to make the packaged and bound ceramics not easy to disperse, the last third step is to knot grass, and the ceramics after the three processes of packaging and binding will not be easily damaged no matter how they swing. In the local language of Jingdezhen, it means knotting grass, rolling grass dragons and tying grass strips, which is the most traditional and oldest packaging method of Jingdezhen ceramics in recent thousands of years. Bamboo baskets and cypresses were also the most traditional tools used to sell ceramics in Jingdezhen at that time. They were hand-made with cut wood and bamboo as the most basic processing raw materials. Their greatest advantages were that they were not easy to rot candles, rusted and resistant to pressure, and the manual processing cost was very low. According to the History of Jingdezhen Ceramics, the transaction record of Jingdezhen ceramics using baskets for packaging and trading at that time was recorded in detail. Jingdezhen ceramic packaging industry entered a new period of vigor and vitality with the development of ceramic industry in the early days of liberation. In just a few years, hundreds of factories, large and small, have been set up in Jingdezhen, including packaging factories for ceramic production, paper mills and printing houses to improve people's cultural life needs. The rise and growth of a large number of processing industries serving manual manufacturing has laid a solid foundation for Jingdezhen ceramic packaging industry. With the strong cooperation of major ceramic companies under the leadership of the municipal government and ceramic enterprises in the whole city, carton packaging, brocade box packaging and color box packaging of ceramic products have been promoted before and after, and the standard and design of Jingdezhen ceramic packaging have been preliminarily standardized. Brocade boxes have always been the first choice for gift packaging in China traditional gift industry. In recent years, it is the most common choice to use brocade box in Jingdezhen's middle and high-grade ceramic packaging. Brocade box is made of cardboard, silk cotton cloth is used for secondary packaging, and the interior of brocade box is made of poly velvet, bubble paper, pearl cotton and sponge. At the beginning of the 21st century, the packaging of high-grade ceramics in Jingdezhen showed a great upward trend, and various artificial leather materials and other gemstones and jade ornaments were used. It is very extravagant to use these external packaging to improve the value of ceramic products. This kind of elaborate ceramic packaging phenomenon does not comment on good or bad, but these methods are all a way for merchants to promote ceramic products. Through the study of the historical development of Jingdezhen ceramic packaging, we have obtained a table illustrating the millennium-long transformation of ceramic packaging, as shown in Figure 2. The table provides a clear and comprehensive understanding of the history of Jingdezhen ceramic packaging development.

**Figure 2:** List of Millennium Ceramic Packaging Changes

千年陶瓷包装变迁一览表 List of Millennium Ceramic Packaging Changes												
包装方法 Method of packing 年代 Era	豆麦发芽 Soy wheat Germination	木桶 Wooden barrel	木框 (箱) Wooden frame	绳索 Rope	篾筐 Basket	稻草 Straw	木箱 Wooden box	瓦楞纸箱 Corrugated carton	锦盒 brocade box	彩印纸箱 Color printing	礼品包装 Gift package	托盒式集中化箱 Tray centralized
唐代 Tang Dynasty												
宋代 Song Dynasty												
元代 Yuan Dynasty												
明代 Ming Dynasty												
清代 Qing Dynasty												
民国 Republican period												
1949-1959 年												
1960-1969 年												
1970-1979 年												
1980-1989 年												
1990-1999 年												
2000-2014 年												
2014-2023 年												

**Research on Jingdezhen Ceramic Packaging Market**

Jingdezhen Taoxichuan, Jingdezhen Sculpture Porcelain Factory and other places were selected for field



research, as shown in Figure 3. The study primarily involved two groups: store workers and ceramic consumers. This study is based on literature and network research, using in-depth interviews and field observations. The purpose of this on-site visit is to gain a deeper understanding of the current situation of Jingdezhen ceramics market, the situation of Jingdezhen ceramic packaging, and understand the needs and existing problems of ceramic packaging from the perspective of buyers.

Taoxichuan is Jingdezhen's "Ceramic Culture Creative Park," covering an area of one square kilometer with a total building area of 1.6 million square meters. Taoxichuan has attracted artists, designers, and makers from all over China and overseas, making it a hub that integrates ceramic heritage preservation, industrial upgrading, and urban renewal into a business and cultural tourism project. In 2022, Taoxichuan received over 3.9 million visitors. It is recognized as the only national-level cultural industry demonstration zone in Jiangxi Province, a national double-creation demonstration base, a national entrepreneurial incubation demonstration base, a national copyright demonstration zone, a national-level nighttime culture and tourism consumption cluster area, a national-level intangible cultural heritage tourism district, and more.

The survey conducted in Taoxichuan covered 20 shops, of which 12 agreed to participate in the survey. The survey included the attitudes of shop owners towards packaging and suggestions for improvement, as well as the current state of packaging and market aspects. The statistical results showed that out of the 12 shops surveyed, only one approved of the existing Jingdezhen ceramic packaging, while 83.3% (5/6) of the shops believed that improvements were needed. They identified problems with packaging, including insufficient environmental awareness (5/6), lack of creativity (5/6), limited visual appeal (4/6), simplicity in structure (3/6), and a lack of branding (2/6). The survey also found that the shops surveyed mainly used series packaging designs created through brand design, and consumer purchasing decisions were influenced primarily by their preferences for product style and the shopping environment.

Jingdezhen Sculpture Porcelain Factory was established in 1956 and is primarily focused on ceramic sculpture production, but it also produces various other products such as garden ceramics and decorative ceramics. The factory is rated as a national second-level enterprise, designated as a national tourism merchandise production enterprise by several ministries including the National Tourism Administration, and recognized as a national advanced environmental protection enterprise by the State Environmental Protection Administration. The products of Jingdezhen Sculpture Porcelain Factory are primarily ceramic sculptures, supplemented by garden ceramics, decorative ceramics, industrial mold ceramics, and more. The factory also undertakes projects such as urban sculpture, garden sculpture, architectural sculpture, and has become a new benchmark for Jingdezhen's ceramic cultural and creative industry.

Jingdezhen Sculpture Porcelain Factory places significant importance on packaging design, with some shops adopting relatively innovative packaging designs, including functional packaging that can be reused and structurally optimized packaging designs. Most shops emphasize brand awareness and have a certain level of environmental awareness, primarily using paper box packaging. However, they indicated that there is room for improvement in the creativity and humanized service experience of ceramic packaging.

The Jingdezhen ceramic market also faces some issues, including the counterfeit of non-Jingdezhen ceramics as Jingdezhen-made products, using the "Jingdezhen Made" logo. In addition, there are limited options for packaging factories, and there is not much gender diversity among staff, resulting in low identification. Customized packaging often requires large initial orders, which many handmade workshops find difficult to meet. Furthermore, packaging materials are not environmentally friendly, and storage conditions are also problematic.

In summary, the research reveals that the recognition of Jingdezhen ceramic packaging design is relatively low. In the Taoxichuan area, packaging mainly consists of simple styles of brocade boxes, with a low level of environmental awareness and the use of mostly non-environmentally friendly materials

such as polystyrene and polyethylene for inner ceramic packaging. The level of branding is relatively low, creativity is lacking, and the visual appeal is not strongly associated with the products. In the sculpture porcelain factory area, paper box packaging is more common, with an emphasis on the visual appeal of the packaging and a certain degree of innovation and environmental awareness. Local handmade workshops in Jingdezhen often struggle to meet the large-scale production requirements of packaging, and there are issues with the environmental friendliness of packaging materials and storage conditions.

**Figure 3:** Jingdezhen Tao Xichuan Jingdezhen Sculpture Porcelain Factory



Jingdezhen Tao Xichuan

Jingdezhen Sculpture Porcelain Factory

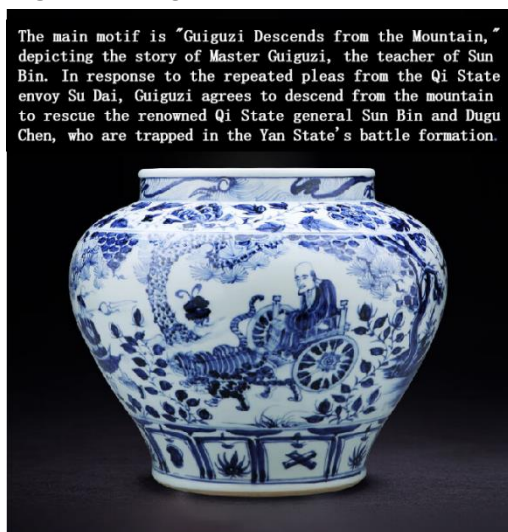
## Conclusion

Studying the history of Jingdezhen ceramics and the development of ceramic packaging allows for a deeper understanding of local ceramic culture and its integration into ceramic packaging design. Drawing inspiration from history, the packaging design can be linked to historical events, figures, or periods related to local ceramics. Patterns, styles, or stories of historical porcelain can be displayed on the packaging, as shown in Figure 4. The theme of Figure 4 is "Guiguzi Descends from the Mountain," depicting the story of Sun Bin's teacher, Guiguzi. At the repeated pleas of the Qi State envoy Su Dai, Guiguzi agreed to descend from the mountain to rescue the renowned Qi State generals Sun Bin and Dugu Chen, who were trapped in the Yan State's formation. Integrating unique traditional ceramic craftsmanship specific to the region into packaging design, such as specific firing techniques or decorative methods, can create a distinct artisanal feel on the packaging. As shown in Figure 5 Selecting elements that align with local ceramic motifs and patterns can infuse the packaging design with regional characteristics. These motifs can appear on the edges, background, or decorations of the packaging. Drawing inspiration from the color characteristics of local ceramics and using corresponding colors in the packaging design can align the packaging with the ceramic style. Incorporating local ceramic legends, historical events, or cultural stories into the packaging through text, images, and other forms can evoke emotional resonance. Employing symbols, symbols, and patterns associated with local ceramic culture in packaging design can convey deep cultural connotations. When integrating local ceramic culture, it's important to respect tradition while considering modern aesthetics and market demands. Skillfully infusing local ceramic culture into packaging design can enhance the product's unique charm and emotional value, while simultaneously promoting the inheritance and development of local culture.

Throughout history, the packaging of Jingdezhen ceramics has undergone continuous evolution and innovation. From the earliest simple packaging methods, such as using grass for wrapping, to later materials like paper and bamboo, as well as modern printing packaging, we can observe the gradual emergence of different forms and techniques in ceramic packaging. Historical ceramic packaging methods often closely relate to transportation and protection. For instance, during maritime periods, special packaging techniques helped mitigate damage and loss during sea transportation, like using grass bindings and paper wrapping to

secure the porcelain. The choice of packaging methods and materials was closely linked to the culture, technology, and social environment of the time. Research reveals that ceramic packaging also reflects the local cultural characteristics and evolution, such as the use of traditional bamboo baskets and silk fabrics. Over time, environmental consciousness has gained prominence in packaging design. Historical packaging methods often fell short of being environmentally friendly, whereas modern research and practices emphasize the importance of green packaging to minimize environmental impact.

**Figure 4:** Guiguizi Descends from the Mountain **Figure 5:** ceramic pattern



### Principles of Green Packaging Design

While both green design and green packaging design emphasize environmental friendliness and sustainability, they have different focuses and scopes of application. The core of green design lies in the "3R1D" principle: Reduce, Recycle, Reuse, Degradable. This entails minimizing resource and material consumption, designing materials for recyclability, ensuring components are recyclable, and using degradable materials to reduce environmental pollution.

Green packaging design is a subset of green design, concentrating on the environmental impact of packaging materials and design. It emphasizes using eco-friendly materials, reducing resource consumption in packaging, optimizing packaging structures to minimize waste generation, and encouraging recyclable and reusable packaging designs. Green packaging design also considers the protection of products and the efficiency of transportation, ensuring environmental-friendliness without compromising functionality. Thus, while green design focuses on a product's entire lifecycle, including design, manufacturing, use, and disposal, green packaging design concentrates on the environmental impact of packaging materials and design, as well as how to minimize environmental impact while meeting functional needs. Both are crucial components of sustainable development, aiming to promote more eco-friendly and sustainable design and production methods.

In summary, these principles can be summarized as the 3F principles:

(1) Fit for the Nature Principle "Fit for the nature" signifies adapting packaging design to align with environmental and eco-friendly concepts. This principle emphasizes incorporating natural elements and environmental concepts into product packaging design to reduce environmental impact. It aligns with



values such as sustainability, environmental consciousness, and eco-friendliness.

Choose sustainable materials in packaging design, such as biodegradable, recycled, or recyclable materials, to lessen environmental burdens. Consider the environmental impact of materials during packaging design, avoiding over-packaging and minimizing the use of unnecessary plastics and other environmentally harmful materials. Integrate natural elements, like patterns, colors, or textures, to convey the product's connection with the natural environment. Clearly communicate environmental characteristics, material sources, recycling methods, and other relevant information on the packaging to enable consumers to make environmentally conscious purchasing decisions. Design packaging with efficient resource utilization to minimize material waste and energy consumption. Consider the entire lifecycle of packaging, from design and production to distribution and disposal, ensuring adherence to environmental principles. Packaging design should align with the brand's environmental values to enhance brand image and consumer identification. In essence, the "Fit for the nature" packaging design principle emphasizes environmental consciousness, sustainability, and integration of natural elements to better adapt to the environment and reduce negative impacts.

(2) Fit for the People Principle The "Fit for the people" principle centers on meeting the needs, preferences, and experiences of target audiences to create packaging designs that resonate with them.

When designing packaging, clearly define the target audience, considering their preferences, habits, cultural backgrounds, and values. Packaging design should be attractive and stand out on store shelves, grabbing attention in a competitive market through unique appearances. Information on the packaging should be clear and understandable, allowing consumers to quickly grasp the product's features, uses, and advantages. Consider ergonomic principles and user experience to ensure that packaging is easy to open, use, and store. Packaging design should communicate the product's core values and brand story, establishing an emotional connection with consumers. Consider offering customizable packaging options to cater to diverse consumer preferences. Packaging design should meet the functional needs of the product, such as protection, storage, and transportation. Integrate interactive elements into packaging design to engage consumers, enhancing brand participation. Packaging design should trigger emotional resonance, eliciting emotional responses from consumers and strengthening brand loyalty. Incorporate digital elements, such as scanning QR codes for additional information, participation in activities, or obtaining discounts. Consider differences in cultures and regions, ensuring that packaging design is applicable globally. Packaging design should be flexible for updates, adjusting over time based on market changes and consumer feedback. Overall, the "Fit for the people" packaging design principle focuses on meeting the needs of the target audience, providing a positive user experience, and creating attractive packaging designs that align with brand values.

(3) Fit for the Time Principle The "Fit for the time" packaging design principle emphasizes staying abreast of current trends, cultural shifts, and changes in consumer behavior to maintain packaging's freshness, appeal, and adaptability.

Reflect current fashion and cultural trends in packaging design to attract younger consumers and those with a sense of fashion. Explore novel packaging design concepts and technologies to create a unique impression in the market. Integrate digital elements like augmented reality (AR) or virtual reality (VR) into packaging design to offer consumers more interactive and engaging experiences. Consider designing for variability, enabling packaging to be adjusted for different seasons, holidays, or events. In line with sustainability and environmental trends, design eco-friendly packaging to align with modern consumers' environmental concerns. Consider the shareability of designs on social media to allow consumers to engage with brand promotion by sharing photos of packaging. Packaging design should trigger emotional resonance and evoke emotional responses from consumers, enhancing brand loyalty. Integrate digital elements such as scanning

QR codes for extra information, participation in activities, or obtaining discounts. Consider cultural and regional differences, ensuring that packaging design is globally applicable. Packaging design should have flexibility for updates, adapting to market changes and consumer feedback over time. In essence, the "Fit for the time" packaging design principle emphasizes staying current with trends and cultural changes, utilizing innovation, digital technologies, and environmental concepts to meet modern consumers' needs, maintaining packaging's freshness and appeal.

### **Innovative Practices in Green Ceramic Packaging Design**

The innovative practices in green ceramic packaging design aim to embrace eco-friendly and sustainable design principles and materials to reduce the adverse environmental impact while enhancing packaging efficiency and sustainability. These practices involve the use of biodegradable materials such as biodegradable plastics and degradable fibers, which can decompose in natural environments, reducing environmental pollution. Selecting suitable degradable materials requires a comprehensive consideration of product characteristics, usage, environmental conditions, and decomposition rates. Common degradable materials include biodegradable plastics like polylactic acid (PLA), polyhydroxyalkanoates (PHA), and polybutylene adipate terephthalate (PBAT), degradable starch, degradable fibers (such as corn fiber and bamboo fiber), degradable plastic films, degradable foam, degradable paper, cardboard, and films. These practices contribute to improving packaging sustainability while minimizing the adverse environmental impact. Greek designer George Bosnas recognized that traditional waste management processes consume significant energy, incur high costs, and are time-consuming. Consequently, he designed an intriguing and sustainable bio-packaging for eggs, as shown in Figure 6. The plump little box is crafted from purified transparent pulp, flour, starch, and biological seeds. It can snugly hold four eggs in one package to prevent them from breaking. This packaging allows users to quickly and prominently see the benefits of sustainable packaging. After use, the packaging can be directly used as planting soil, with the seeds contained within the box sprouting in just six days and producing pods in 30 days. Additionally, it was discovered that growing legume vegetables could improve soil fertility by fixing atmospheric nitrogen through root nodules. This is a great example of a biodegradable packaging design that we can learn from when designing green ceramic packaging.

**Figure 6:** Biodegradable egg packaging



Designing reusable ceramic packaging, such as exquisite gift boxes or packaging containers, encourages consumers to retain and reuse the packaging, reducing the use of disposable packaging. Using eco-friendly inks and printing techniques for ceramic packaging minimizes the use of harmful chemicals, safeguarding both the environment and workers' health. Crafting ceramic packaging from natural materials like bamboo fibers, algae, and others, known for their excellent environmental performance, ensures recyclability. Labeling the packaging with green packaging design symbols communicates its eco-friendly attributes to consumers, increasing awareness and willingness to purchase environmentally

friendly products. Exploring the design of multifunctional ceramic packaging, such as packaging boxes or containers that can serve alternative purposes, enhances packaging reusability. Utilizing recyclable paper-based fillers to protect ceramic products, as opposed to conventional plastic bubble wraps and fillers, aids in reducing plastic waste. As depicted in Figure 7, this rice packaging is made from rice bran generated during the dehushing process, featuring embossed rice grain patterns on the inner lid. This understated yet natural box can also be reused, for instance, as a tissue holder, thanks to the rice-shaped opening on the top. This isn't just an elegant packaging solution but also a continuation of eco-conscious ideals, instilling hope for the future!

**Figure 7:** Recyclable material reusable rice packaging



Simplified Packaging Structure refers to simplifying packaging design into basic structures and elements, removing unnecessary decorations and complexity, with the aim of saving materials, reducing costs, and minimizing resource consumption. Simplified packaging structures typically focus on practicality and functionality while maintaining the quality and protective performance of the packaging. Some common methods for simplifying packaging structures include using simple basic shapes like squares, rectangles, or circles to streamline the packaging's design. Efforts are made to minimize the packaging size to avoid wasting space and materials. Multiple components are merged into a single structure to reduce the use of parts and connections. Simple sealing methods such as folding, gluing, or straightforward binding are used to avoid complex sealing structures. The use of decorative elements is minimized, retaining only essential brand identifiers and necessary information to simplify the packaging design. Designing reusable packaging, such as foldable boxes or collapsible packaging, is encouraged to reduce the use of disposable packaging. Environmentally friendly, recyclable, or biodegradable materials are used to minimize environmental impact. Simplified packaging structures help reduce manufacturing costs, conserve resources, and minimize waste generation. They also enhance packaging efficiency, reducing time and energy consumption during the packaging process. As shown in Figure 8, the Anaya Jinshanling Honey packaging design is a valuable case study. Anaya is a high-end real estate development brand. This packaging is designed for two locally produced honey varieties in Jinshanling, the location of Anaya's high-end ecological real estate project, "Anaya Jinshanling." The inspiration for the inclined shape of the box comes from the client's italicized brand logo, aligning with their brand image. Additionally, the glue-free folding structure design conveys their eco-friendly brand values. The continuous mountain peak pattern on the outer packaging and the shape of the honey jar label are simplified representations of the local real mountain scenery. The embossed contour lines inside the outer packaging convey the

brand's concept of "surrounded by nature." Simultaneously, the simplified packaging structure helps reduce the packaging's negative impact on the environment, aligning with the principles of sustainable development and meeting modern consumers' demand for eco-friendly products.

**Figure 8:** Anaya Jinshanling honey packaging



By drawing inspiration from these green packaging practices and applying them to our ceramic packaging designs, we can achieve widespread adoption within the ceramic industry. This will drive the industry towards a more environmentally friendly and sustainable direction, reducing resource consumption and environmental pollution. Furthermore, these innovative practices will contribute to enhancing a company's competitiveness, meeting consumer demand for eco-friendly products, and establishing an environmentally conscious corporate image.

### **Challenges and Opportunities in Jingdezhen Ceramic Packaging**

Currently, there are several significant issues in the field of Jingdezhen ceramic packaging. Firstly, businesses lack awareness in brand development, failing to integrate packaging design with their corporate identity, resulting in a lack of brand recognition. Secondly, ceramic products are prone to damage during transportation due to the absence of suitable packaging methods. Lastly, the ceramic packaging industry lacks awareness of environmental sustainability, leading to significant material wastage. The fundamental reasons for these issues include low investment costs, low educational levels among packaging personnel, and a shortage of professional packaging designers. Implementing green packaging practices in the ceramic industry to address these issues may encounter some potential challenges and obstacles. The use of sustainable and environmentally friendly materials is often more expensive than traditional materials, which may increase packaging costs. Furthermore, adopting new production processes and technologies may require additional investments. Cost reduction can be achieved through innovation and scaled production. As the demand for sustainable materials increases, their prices may decrease over time. Additionally, businesses can consider long-term returns on investment, such as enhancing brand value and meeting consumer demands, to offset extra costs. Adopting green packaging requires new technologies and production processes. Some ceramic companies may need technological upgrades to adapt to these changes. Collaboration with technical experts, training, and technical support can ensure that employees master these new technologies. Companies can also consider establishing partnerships with research institutions or universities to gain technical support. Obtaining sustainable and eco-friendly materials may necessitate a supply chain realignment, which may include partnering with new suppliers or changing raw material procurement methods. Building a sustainable supply chain and establishing strong relationships with suppliers are essential. Diversifying suppliers can reduce risks and ensure the sustainability of the supply chain. Consumer acceptance of green packaging may vary due to factors such as price, quality, and habits. Educating and informing consumers about the benefits of green packaging is crucial. Ensuring that product quality and



performance remain uncompromised and offering additional value in sustainable packaging, such as reusability, can be advantageous. Employee training is necessary for employees to understand new packaging practices and sustainability standards. Investing in employee training and education ensures their comprehension and active participation in green packaging practices.

Overcoming these challenges requires a commitment to innovation from businesses. However, adopting green packaging practices can provide sustainable competitive advantages for companies, cater to the growing demand for environmentally friendly products, and contribute to the ceramic industry's transition towards greater sustainability. This presents opportunities for the Jingdezhen ceramic packaging industry. By embracing green packaging, Jingdezhen ceramic enterprises have the opportunity to gain a competitive edge in sustainability. As consumer demand for eco-friendly products increases, businesses with eco-friendly packaging may become more attractive. With a growing number of consumers focusing on environmental protection and sustainability, adopting green packaging can meet their demands and enhance product marketability. Implementing green packaging can also boost a company's environmental image, potentially increasing brand value and recognition. Green packaging helps reduce resource wastage and environmental pollution, contributing to the ceramic industry's sustainable development goals. These opportunities can assist the Jingdezhen ceramic packaging industry in finding new development paths in the face of challenges, ultimately driving the entire industry towards greater environmental-friendliness and sustainability.

### **The Significance of Green Packaging in the Ceramic Industry**

Green packaging holds significant importance in the ceramic industry as it can positively impact the environmental performance and sustainability of the entire supply chain. The ceramic packaging manufacturing process requires substantial raw materials, and green packaging can employ recyclable and renewable materials, reducing dependence on non-renewable resources and conserving natural resources. Traditional packaging often generates considerable waste, whereas green packaging, utilizing eco-friendly materials, can decrease waste generation, thereby reducing environmental burden. Green packaging design emphasizes lightweighting and reducing packaging volume, contributing to lower energy consumption during transportation and storage and subsequently decreasing carbon emissions. Adopting green packaging can enhance the environmental image of ceramic enterprises, showcasing their commitment and responsibility toward environmental conservation and increasing consumer favorability. The adoption of green packaging in the ceramics sector is an integral part of sustainable development, aiding in minimizing negative environmental impacts and propelling the industry toward a more environmentally friendly and sustainable trajectory. Many countries and regions have stringent regulations and standards for packaging materials and environmental requirements, and green packaging assists businesses in compliance, avoiding potential legal liabilities and penalties. In the modern age, consumers are increasingly concerned about environmental protection and sustainability, and green packaging can meet their demand for eco-friendly products, creating more market opportunities. In summary, green packaging is crucial for the ceramic industry. By utilizing environmentally friendly materials and designs, ceramic companies can reduce their environmental impact, enhance their competitiveness, and contribute positively to environmental protection and sustainable development. The impact of green packaging on brand image is overwhelmingly positive. It aids companies in establishing a strong environmental image, bolstering consumer recognition and trust. The incorporation of green packaging design highlights a company's environmental consciousness and sense of responsibility, conveying their commitment to environmental causes and shaping a positive eco-friendly image. Modern consumers prioritize environmental protection and sustainability, and green packaging resonates with their values, making it easier for consumers to identify and accept the brand. Green packaging communicates the company's concern for the environment and consumer health,

enhancing consumer trust in the brand and encouraging greater willingness to purchase and recommend its products. Green packaging can make a brand stand out in the market, increasing brand visibility and recognition, making it easier for consumers to identify and remember the brand. In a fiercely competitive market, green packaging can differentiate a brand from its competitors, forming a unique brand identity and boosting the brand's market competitiveness. Positive green packaging design can win consumer praise and word-of-mouth recommendations, encouraging consumers to actively endorse the brand and further elevating its reputation and recognition. Employing green packaging to showcase a company's social responsibility aids in enhancing the company's social image, attracting more attention and support from consumers and partners. In conclusion, the impact of green packaging design on brand image is multifaceted. It aids companies in establishing a positive environmental image, reinforcing consumer identification and trust, increasing brand recognition and competitiveness, thus generating more business opportunities and development prospects. Therefore, an increasing number of companies recognize the importance of green packaging in brand image enhancement and are actively adopting environmentally friendly packaging to elevate brand value.

### **Integration of Indigenous Cultural Concepts with Ceramic Packaging**

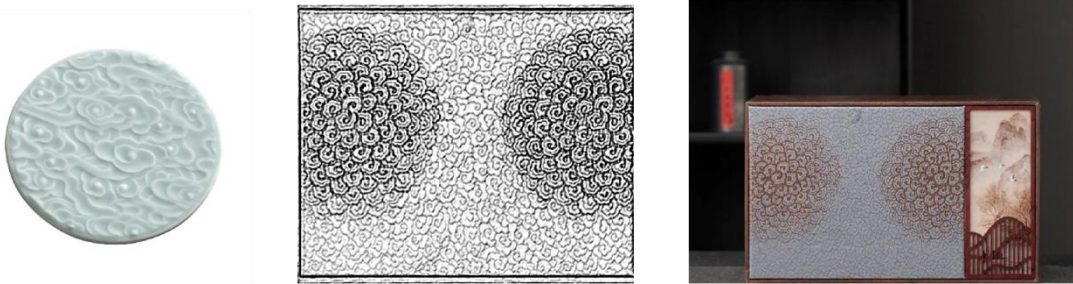
Local traditional patterns best reflect the ethnic characteristics and cultural heritage of a region. They transform an abstract concept into a concrete form and a vehicle for communication during the process of materialization. One of the primary design elements in ceramic packaging is patterns. Patterns have a straightforward expressive effect and bring their own strong appeal. They occupy a significant position in the fierce competition of modern ceramic products. Traditional Chinese ceramics from Jingdezhen, as shown in Figure 9, feature a wide variety of traditional art patterns throughout different dynasties. These patterns, such as depictions of figures and animals on ceramic vessels, showcase the exquisite craftsmanship of artisans and are typical of traditional Chinese designs. These traditional patterns are rich in content and cover a wide range of topics, displaying vivid, natural, and exquisite imagery. Whether used as the main pattern or applied to backgrounds, corners, or borders, they imbue a sense of classic antiquity and possess a strong decorative charm. These features of traditional patterns can be effectively employed in ceramic packaging design and represent the sought-after form in modern ceramic packaging.

Ceramic packaging design can fully utilize these precious materials as basic elements, organizing and combining them to create exclusive ceramic packaging patterns, as shown in Figure 10. In selecting patterns from ceramic designs, the cloud of auspiciousness pattern is often chosen for redesign. While preserving traditional elements, it undergoes modern reinterpretation. This pattern, commonly seen in traditional Chinese art and culture, represents good fortune and auspiciousness. It is typically depicted in the form of clouds, symbolizing a bright future and happiness. Ceramic patterns convey the characteristics of local culture, and by exploring and extracting these pattern resources, they can help promote traditional Chinese ceramic culture.

**Figure:** Pattern on ceramic



**Figure 10:** Ceramic patterns integrated into packaging design



The image and symbolic colors of Jingdezhen ceramics are the primary elements in packaging Jingdezhen ceramics, while symbolic colors are used to convey specific meanings or symbols associated with Jingdezhen ceramics through color. In most cases, both attributes are phenomena of color psychology or associations with certain colors related to something. Starting from the Yingqing glaze, Jingdezhen craftsmen have tirelessly developed countless single-color glazes, including the green of mountains, the deep blue of the sea, the clearness of streams, the green of spring, and the yellow of autumn. Among them, the blue and white color is the traditional representative color of Jingdezhen ceramics, carrying a strong sense of Chinese traditional culture and historical heritage. This representation needs to choose the appropriate image color based on the characteristics of the contents. For example, in the packaging of the Qianli Jiangshan tea canister set from Jingdezhen, as seen in Figure 11, the product's own blue color is visually enhanced for a more striking presentation. In addition to image colors, the use of symbolic colors is also crucial. Red symbolizes prosperity, joy, and good fortune and is often used on ceramic products for festivals and weddings. Yellow is seen as the color of royalty and nobility, conveying a sense of honor and prestige when used on ceramic products. Purple is considered a mysterious and elegant color, commonly used on ceramic artworks to express unique aesthetic feelings. At the same time, Jingdezhen ceramic packaging design often uses symbolic colors that have regional characteristics and cultural connotations, which are closely related to Jingdezhen's cultural background. In packaging design, the use of storytelling, events, and symbolic displays based on the product's background and characteristics, while making full use of the visual recognition of colors, is essential. Its application should take into account product positioning, target consumers, cultural connotations, and more. It also needs to emphasize the overall effect of packaging design and the consistency of brand image to achieve the best visual and marketing results. A color scheme is a specific combination of colors that can evoke specific emotions and feelings in people visually. Color coordination and style in the packaging design of Jingdezhen ceramics are also very important factors.

For this specific product, color coordination needs to align with its particular aesthetic requirements and cultural background. Traditional colors of Jingdezhen ceramics include blue and white, colored enamels, and underglaze red. These traditional colors can be applied in packaging design to highlight the traditional cultural characteristics of ceramics. Japanese master Hiroshi Ohchi once pointed out that in a competitive market, the identification function of packaging colors is especially important. The combination of original ceramic colors is one of the main ways to present the recognizability of Jingdezhen ceramics. Jingdezhen's ceramic artisans, such as Yu Tian and Wan Liang, have experimented with various glaze colors over the years, using quantitative analysis with fluorescence spectra and recording data for each color tone to create a color archive for Jingdezhen. However, the success rate of these color experiments is low due to various factors such as glaze formulation, firing, and clay materials. Nevertheless, these excellent colors can break through technical limitations in ceramic packaging design. Modern design that takes into account the brightness and purity of colors in ceramics can create attractive, easily recognizable, and pleasant characteristics. The rhythm inherent in ceramic colors, through emphasizing color relationships, allows relatively isolated colors to provide a well-organized visual experience. Thus, Jingdezhen ceramic products can establish a complete color system and visual style. Color style can evoke deeper meanings and extend the connotations of culture. The application of color coordination in Jingdezhen ceramic packaging design must align with consumer aesthetic requirements and cultural backgrounds while considering product characteristics and positioning. When using color style, suitable color combinations should be chosen based on the product's characteristics and target audience, complementing the emotional content of ceramic products to achieve a mutually beneficial effect. Using the inductive analysis method, ceramic colors are classified into nine major color schemes, and a color spectrum for ceramic packaging is established, as seen in Figure 12. The color on the porcelain body presents a vivid hue, which, when used and coordinated in modern packaging, should inherit the wisdom of China in coloring ceramics according to their categories. These representative colors on ceramics best reflect the local ceramic culture. When designing ceramic packaging, we can fully utilize them to achieve the most intuitive fusion of local culture and packaging.

**Figure 11:** ceramic tea caddy packaging



**Figure 12:** Nine Colors of Jingdezhen Ceramics





### Integrating local culture and green design into ceramic packaging

Integrating Local Culture and Green Design into Ceramic Packaging is an interesting and challenging task that can add a unique charm to products while conveying environmental and sustainable values. Firstly, understanding the local culture of the area, including traditional customs, art, symbols, folklore, etc., is crucial. Choose a cultural theme related to ceramic products to incorporate into the packaging design. Use symbols and patterns from the local culture in the packaging design, which can include traditional motifs, local flora and fauna, historical figures, or specific geographical features. These patterns can be used as borders, backgrounds, or decorative elements in the packaging. Consider using colors with symbolic significance from the local culture. Each color may have its unique cultural meaning, so ensure that the color choices align with the cultural theme. Create a packaging narrative to incorporate local cultural elements. This story could be about the legend behind the product or a story related to the local culture to pique the interest of consumers. Use sustainable materials in the packaging design, such as biodegradable plastics, recycled paper, or bamboo, to emphasize the commitment to the environment. This aligns with the principles of green design and enhances sustainability. Consider simplifying the packaging structure to reduce material usage. Elegant design can reduce resource waste while maintaining aesthetics. Design reusable packaging, such as ceramic jars or boxes, to encourage consumers to keep and reuse the packaging, reducing the demand for disposable packaging. If possible, collaborate with local artisans to create the packaging. This not only supports the local economy but also adds unique artisanal details. Use eco-friendly printing techniques and inks to reduce the use of harmful chemicals, contributing to environmental protection and sustainability. Consider the functionality of the packaging. Packaging can serve multiple purposes, such as display shelves, vases, or tableware, increasing its value. Provide information about local culture and eco-friendly design on the packaging to raise consumer awareness of the product and packaging. If feasible, integrate product packaging with local cultural events. This can include introducing customized packaging during specific festivals to attract more consumers.

As shown in Figure 13, this is a ceramic packaging design created by the author. By researching the local cultural elements of ceramic jar products, patterns inspired by landscape paintings and relief patterns on the bottle were incorporated into the packaging box. The traditional elements of ceramic landscapes were fused with decorative patterns. The surrounding carving techniques also depicted the shape and theme of mountains. This achieves the fusion of the product and packaging to convey the product's own culture. In

line with the principles of green design, the packaging box retains the natural color of bamboo and only inserts the white color of the ceramic jar as the background, featuring the landscape pattern as a design highlight. Biodegradable materials were chosen for both the inner lining and the external carrying bag, which can decompose under home composting conditions. Combining local culture with green design in ceramic packaging can give products a unique local character while conveying environmental values, attracting consumers interested in cultural heritage and sustainability. Additionally, this packaging design helps establish connections with the local community and supports local artisans and artists.

**Figure 13:** Design example



### **Value Extension of Packaging for Jingdezhen Ceramics**

The inheritance of traditional ceramics culture in Jingdezhen requires a medium and a platform for the transmission of this traditional culture. Packaging, as the outer shell of ceramics products, serves as an excellent medium for this cultural transmission. Ceramics enterprises play a vital role in showcasing and transmitting traditional culture. For the continued propagation of ceramics culture, it's crucial for Jingdezhen ceramics enterprises to thrive economically, primarily relying on the economic benefits brought by the ceramics products they produce, with ceramics packaging being the most effective means to boost ceramic sales.

In the design of Jingdezhen ceramics packaging, emphasis should be placed on innovating current ceramic packaging in the market, thereby changing the current status quo. Existing issues in Jingdezhen ceramics packaging must be addressed and innovated upon to make Jingdezhen ceramics packaging more competitive and appealing in the sales process. This can allow Jingdezhen ceramics enterprises to gain a higher market share in the fiercely competitive market. A higher market share indicates a broader audience, providing favorable conditions for the inheritance and dissemination of traditional ceramics culture.

The design of packaging for Jingdezhen ceramics is a way to reshape the brand image of ceramics enterprises and create brand value. Currently, aside from basic labeling with company names, there is hardly any indication of ceramics enterprises or any brands on most ceramics packaging in the market. Most ceramics packaging only serves basic functions. Consumers consider purchasing such ceramics products only when they have a specific need. However, consumers have a high degree of freedom in their choices, and their decisions are not influenced by brand recognition. This type of ceramics product is likely to be forgotten quickly by consumers. Therefore, in the process of designing ceramics packaging, designers must incorporate elements of the ceramics enterprise's brand culture into the packaging design. This way, consumers, when choosing ceramics products, will also come into contact with the packaging and develop positive associations with the packaging and the enterprise's brand. This, in turn, can increase consumer brand loyalty, prompting them to choose brands they have positive feelings for in the future. Such ceramics packaging can help ceramics enterprises in the market not only by occupying more market share but also by enhancing the economic value of their ceramic brands.

The establishment of a brand for Jingdezhen ceramics enterprises is a long-term process, continuously reinforced and consolidated over time. Ceramics packaging evolves alongside the continuous development and renewal of ceramics products. It also plays a role in reinforcing and continuously promoting the brand image of ceramics enterprises. In the context of overall economic integration, for Jingdezhen ceramics products to gain a foothold in the fiercely competitive modern market, it's not enough to solely rely on the excellence of Jingdezhen ceramics products, just as clothing must meet consumers' needs to win their favor. When modern consumers' material needs shift towards psychological needs, the design of ceramics packaging must incorporate the elements of traditional local culture in Jingdezhen into modern design concepts. Simultaneously, it is essential to establish the brand image of Jingdezhen ceramics enterprises. Packaging, as a communication medium, can convey ceramics culture and the brand image of ceramics enterprises to consumers. This plays a crucial role in the inheritance and promotion of excellent ceramics culture and the recognition of the brand image of Jingdezhen ceramics enterprises. Through ceramics packaging as a carrier, the ceramics culture in Jingdezhen is preserved and promoted, and the brand image of Jingdezhen ceramics enterprises is recognized. This enables Jingdezhen ceramics to gain consumer recognition in the fiercely competitive market economy, increase market share, promote the development and branding of Jingdezhen ceramics packaging, and ultimately contribute to the development of the ceramics industry in Jingdezhen.

## Conclusion

This paper has explored the significance of Jingdezhen ceramic packaging design from the perspective of sustainable development and its close connection with local culture. It delved into the fusion of eco-friendly packaging and traditional ceramic culture, offering valuable insights and guidance for the sustainable development of Jingdezhen ceramic industry. In summary, eco-friendly packaging not only demonstrates a company's social responsibility in environmental conservation but also injects new vitality into the inheritance of traditional ceramic culture.

In today's world where global environmental issues are becoming increasingly prominent, eco-friendly packaging has become a common concern across various industries. As a representative of traditional culture, Jingdezhen ceramics should not only possess market competitiveness in packaging design but also be guided by sustainability, aiming to reduce environmental burdens while simultaneously emphasizing cultural heritage and innovation. By incorporating eco-friendly materials, minimizing packaging waste, and advocating renewable energy, Jingdezhen ceramic packaging design can attract more consumers, establish a strong brand image, and achieve a win-win situation for both economic and social benefits.

Simultaneously, packaging design serves as a carrier for the inheritance of local culture. Traditional ceramic culture is a precious asset of the Chinese nation, and packaging, as the external manifestation of ceramics, carries cultural symbols and values. By integrating traditional ceramic elements into packaging design, not only can consumers sense a rich cultural ambiance when purchasing products, but it can also stimulate their awareness and interest in traditional culture. This combination of cultural inheritance and innovation in packaging design contributes to expanding Jingdezhen ceramics' market influence and enhancing its competitiveness in both domestic and international markets.

In conclusion, the fusion of eco-friendly packaging and local culture in Jingdezhen ceramic packaging design is not only meant to adapt to the demands of modern sustainable development but also to perpetuate the treasures of traditional culture. In the future, Jingdezhen ceramic enterprises should continue to innovate in packaging design, incorporating environmental protection concepts and local culture, thereby achieving the dual goals of sustainable development and cultural inheritance. Through such efforts, Jingdezhen ceramic packaging design will usher in broader market prospects for enterprises

and make a positive contribution to safeguarding our planet and upholding human civilization.

## Bibliography

- ChaoQun Fan. (2017). Analysis and Practice of reduction design of ceramic tableware packaging -- take "Porcelain Art Workshop" as an example. 64-87.
- Dan Chen. (2019). Research on the design and packaging of Xiangjie brand pictographic ceramic tea Set. 31-57.
- Dayuan Wang. (1981). Shima Yizhi School Interpretation. Zhonghua Book Bureau.
- Fei Gao. (2020). Talk about the ceramic glazed color decoration technology and techniques. Art literature.
- Guoqing Cao, Fang Xiao. (1988). Jingdezhen Inspection Study. Chinese Social and Economic History Research (2), 6.
- JianYing Hao. (2010). Interpretation of the aesthetic characteristics of traditional ceramic packaging containers. 51-64.
- JianYing Hao. (2012). The phenomenon of "unity" of contemporary ceramic packaging and its countermeasures. 115-136.
- Hu Fei. (2014). On the application of corrugated paper in ceramic packaging -- take the packaging design of "bowl in China tableware" as an example. 9-45.
- Hu Jing. (2012). Elegance, Taste and taste -- Application of ceramic packaging design. 83-95.
- Hunter A. Rauch; YanChen; KeAn; Hang Z. Yu. (2019). In situ investigation of stress-induced martensitic transformation in granular shape memory ceramic packings.
- Ji Zihan and Ruan Junbin. (2020). Research on the safety of ceramic packaging based on literature analysis. 19-32.
- Jiangxi Provincial Department of Light Industry Department of Light Industry. (1950). Jingdezhen Ceramics History Draft.
- JianJie Chen. (2018). Taking Plum vase and Jade Pot Spring vase as an example to study the value of song and Yuan ceramic packaging. 37-43
- Jing Guo. (2017). Cold sintering process: A new era for ceramic packaging and microwave device development.
- Legen Zhu. (2012). The contribution of Jingdezhen ceramic art to the development of world culture · Zhu Le Geng. Jingdezhen Ceramics College.
- HuiRu Li. (2016). Research on the present situation of jingdezhen daily ceramic packaging design. 45-67.
- lijunxiong Li. (2020). Research on the application of Monet's painting style in ceramic packaging design. 10-53.
- Song Li; Zeng Chuan bin; Luo Jiajun; Han Zhengsheng. (2013). The abnormal electrostatic discharge of a no-connect metal cover in a ceramic packaging device. 61-84.
- YangYang Li. (2018). Determination of heavy metal speciation in ceramic packaging of liquor by BCR extraction. 64-82.
- Liang Wenjing. (2015). Application of bionic concept in ceramic packaging design. 65.
- Liu Sheng. (2009). A Novel Ceramic Packaging Technique Using Selective Induction Heating. 14-36.
- Ma Ling. (2018). Study on packaging Structure safety Design of "Ya Zhou pottery" in Pingtang, Guizhou province. 63-84.
- Meng LinWei. (2011). Effect of soaking time on the amount of harmful substances dissolving from ceramic packaging containers. 5.
- Na Li. (2013). Talking about the development process of Jingdezhen ceramics. Netizens World (12), 1. 1.
- Q. J. Kong; D. Y. Liu; P. Wang; D. Q. Xie; Q. Wu; X. Y. Zhao. (2016). Experimental study on the heat and mass transfer characteristics of a counter-flow wet cooling tower with foam ceramic packing.



- Qi Xia; Yuan Lehui. (2018). On "material beauty and craftsmanship" and jingdezhen ceramic packaging design. 84.
- Qin-BaoLin; YueChen; HuanSong; Hai-JunWu; Xiao-YunWang . (2014). Kinetic Migration of Chemical Elements from Ceramic Packaging into Simulated Foods and Mature Vinegar. 86.
- QingLia Duan. (2018). The application of Chengde Regional culture in the packaging of Rice wine -- Taking the design of Rice wine ceramic packaging container as an example. 15-46.
- Ramkumar Ramkrishnan. (2013). Experimental study of cooling tower performance using ceramic tile packing. 21-39.
- Shen Konlin and Maharbiz Michel M. (2021). Ceramic packaging in neural implants. 26-77.
- Sun LiFeng. (2021). New course reform construction of ceramic packaging in western universities under the background of innovation and entrepreneurship. 43.
- T. L. Tsang and D. Perrin. (2019). A Polyimide Removal Process for Die Sealed in Ceramic Package. 73.
- Tang Wen. (2013). Study on re-design of daily ceramic packaging. 5-24.
- Wang Hui. (2017). The application of waste clothes in the packaging of ceramic products -- Taking the packaging design of Jinyun Pottery house as an example. 28.
- Qi Xia; Yuan Lehui. (2018). On "material beauty and craftsmanship" and jingdezhen ceramic packaging design. 84.
- Qin-BaoLin; YueChen; HuanSong; Hai-JunWu; Xiao-YunWang . (2014). Kinetic Migration of Chemical Elements from Ceramic Packaging into Simulated Foods and Mature Vinegar. 86.
- QingLia Duan. (2018). The application of Chengde Regional culture in the packaging of Rice wine -- Taking the design of Rice wine ceramic packaging container as an example. 15-46.
- Ramkumar Ramkrishnan. (2013). Experimental study of cooling tower performance using ceramic tile packing. 21-39.
- Shen Konlin and Maharbiz Michel M. (2021). Ceramic packaging in neural implants. 26-77.
- Sun LiFeng. (2021). New course reform construction of ceramic packaging in western universities under the background of innovation and entrepreneurship. 43.
- T. L. Tsang and D. Perrin. (2019). A Polyimide Removal Process for Die Sealed in Ceramic Package. 73.
- Tang Wen. (2013). Study on re-design of daily ceramic packaging. 5-24.
- Wang Hui. (2017). The application of waste clothes in the packaging of ceramic products -- Taking the packaging design of Jinyun Pottery house as an example. 28.
- Wang J. (2020). Study on the packing characteristics of a special “J” shape ceramic packed pebble bed based on discrete element modeling. 12-28.
- Wang YunDie. (2017). Application of ceramic pillow pattern in the design of ceramic flower pack. 65.
- Wen Yuan. (2019). Chengcheng Yaotou kiln porcelain packaging design. 52.
- Wenli Tang. (2012). Tradition and innovation.
- Xi Zhu. (1984). "Tao Say" translation. Light Industry Press.
- Xiao LI and Don Zhanhua. (2019). Study on the migration of Lead and Cadmium from ceramic packaging materials to liquor. 44.
- Xingqun Lin. (2009). Brand consciousness: The packaging design of ceramic art products. Outreade education in China (Education Edition).
- Xiong Limei. (2021). Application of Computer Virtual Technology in Ceramic Packaging Design. 7-36.
- Xu JiaLong. (2009). Research on safety limit standard of toxic and harmful substances in ceramic food packaging materials at home and abroad. 64-69.
- Yang Xue. (2019). Research on the present situation and development of Jingdezhen ceramic packaging. 13-30.