



SURXONDARYO VA QASHQADARYO NAQSHLARINING BIO-
TEKNOLOGIYALAR YORDAMIDA ZAMONAVIY KIYIMLARGA TATBIQI

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Annotatsiya: Mazkur maqolada Surxondaryo va Qashqadaryo viloyatlariga xos bo'lgan milliy naqshlarning o'ziga xosliklari va ularning zamonaviy kiyim dizaynida qo'llanish imkoniyatlari tahlil qilinadi. An'anaviy ornamentlarni qayta tiklash va ularni yangi texnologiyalar yordamida amaliyotga joriy etish masalalari ko'rib chiqiladi. Xususan, bio-texnologiyalar yordamida tabiiy bo'yoqlar ishlab chiqish, ekologik toza matolar tayyorlash va naqshlarni barqaror usullarda kiyimlarga tatbiq etish yo'llari o'rganiladi.

Ka'lit so'zlari: kiyimlar, bio-texnologiya, ornamentlar, interfeysi dizayni, naqshlar, bezaklar.

**ПРИМЕНЕНИЕ СУРХАНДАРЬИНСКИХ И КАШКАДАРЬИНСКИХ УЗОРОВ В
СОВРЕМЕННОЙ ОДЕЖДЕ С ИСПОЛЬЗОВАНИЕМ БИОТЕХНОЛОГИЙ**

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Аннотация: В статье анализируются особенности национальных узоров, характерных для Сурхандарьинской и Кашкадарьинской областей, и их применение в современном дизайне одежды. Рассматриваются вопросы возрождения традиционных орнаментов и их практического применения с использованием новых технологий. В частности, изучается разработка натуральных красителей с использованием биотехнологий, производство экологически чистых тканей, а также способы нанесения узоров на одежду экологически безопасными способами.

Ключевые слова: одежда, биотехнологии, орнаменты, дизайн интерфейсов, узоры, украшения.



APPLICATION OF SURKHANDARYA AND KASHKADARYA PATTERNS TO
MODERN CLOTHING USING BIOTECHNOLOGIES

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Annotation: *This article analyzes the peculiarities of national patterns typical of Surkhandarya and Kashkadarya regions and their application in modern clothing design. The issues of restoring traditional ornaments and implementing them in practice using new technologies are considered. In particular, the development of natural dyes using biotechnologies, the production of environmentally friendly fabrics, and the ways of applying patterns to clothing in sustainable ways are studied.*

Keywords: *clothing, biotechnologies, ornaments, interface design, patterns, decorations.*

An analysis was conducted on the importance of "The importance of ecologically innovative fabrics in clothing design education and the prospects for their implementation in the modern fashion - costume design industry". In the process of covering the article, the methodological guidelines of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev on the study of history and spiritual heritage, as well as the work of M.V. Kokovina "Eco design at the junction of sciences. Costume design, materials science, bionics, cultural studies, ecology" served as a methodological theoretical and methodological basis [1].

The ecological directions of design are as follows:
ecologization of consumption;
search for new "ecological" materials and technologies;
ecologization of consciousness;
solving the problems of man and culture related to ecology.

Materials and methods: To develop the software, a comprehensive study of traditional decorative elements of Surkhandarya was initially conducted. This includes studying historical patterns, studying their symbolism, and identifying common patterns used in women's clothing. The software development process then involves several steps.

Pattern Digitization: Decorative elements were digitally scanned and converted into vector graphics for easy manipulation by designers.

User interface design: a user-friendly interface has been developed to allow fashion designers to select, Modify and apply patterns to various clothing designs [2].

Design of a pattern is a creative process, consisting of artistic thoughts and plans, the implementation of which in the fabric. Often, the dreams of the pattern designer (creator) are limited by the production conditions and the possibilities of the machine to form a pattern. The complexity of the pattern is in a special place when the product is



mass-produced. Because there are peculiarities in positioning, straining, bottling and sewing parts of the product.

All patterns are divided into three types:

1. Simple patterns (melange) refer to the weft of chipor threads of different colors.
2. Patterns with medium complexity (special attention is paid to placing them on the bed).
3. Large size) gan patterns, while this type of pattern is often the only one in the product

The uniqueness of Surkhandarya and Kashkadarya patterns.

Surkhandarya patterns are often characterized by geometric shapes and images of animals that represent the sun, vitality and blessing. Red, orange and green tones are common in colors.

Kashkadarya patterns are more famous for floral images, Islamic-style lines and shapes close to natural landscapes. Blue, white and gold tones are widely used in the patterns of this region.

Creating patterns that suit it depending on the material:

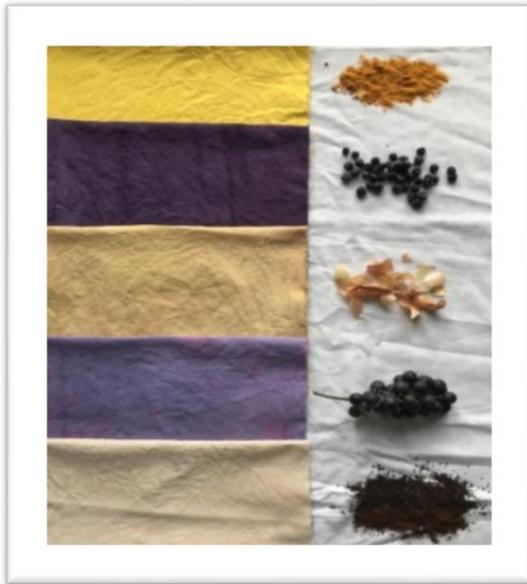
Pinatex fabric does not require additional water or chemicals, as it is made from leftovers - the remaining leaves of pineapples. For example, it requires less water and does not require harmful chemicals that are environmentally toxic to wildlife. The leftover leaves are processed and used for fertilizer or biomass [4].

Silk - Silk has many special purposes due to its delicate and elegant structure. Since ancient times, silk has been a treasured possession for kings and queens. Today, applications remain high-quality and valuable.

Synthetic fabrics - These are fabrics made from fibers produced using industrial processes. In recent years, the increasing demand for various types of clothing fabrics has served to accelerate the growth of industries producing synthetic fabrics.

The study highlights the aesthetic significance of national ornaments in modern fashion, their popularity among young people, and their role in preserving cultural heritage. The results serve as a theoretical and practical basis for the widespread use of Surkhandarya and Kashkadarya patterns in innovative design processes. The development of software for integrating Surkhandarya national decorative elements into the design of women's clothing is a significant step towards the preservation of cultural heritage, embracing technological advances. National patterns, decorations, and ornaments have been widely used in clothing, household items, home decor, and handicrafts since ancient times. These patterns have not only aesthetic value, but also express symbolic and spiritual content [5].

The southern regions of Uzbekistan - Surkhandarya and Kashkadarya regions - have a rich historical and cultural heritage. In particular, national patterns, decorations and ornaments have been widely used in clothing, household items, home decorations and handicrafts since ancient times. These patterns have not only aesthetic value, but also express symbolic and spiritual content. Today, the development of the modern fashion industry and bio-technologies makes it possible to implement these patterns in new forms, in environmentally friendly and innovative clothes.



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