

A Research on the Application of Green Technology in Dance Dresses

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Abstract: It seems odd to put green technology and dancing together for they are two totally different spheres. However, they are connected closely in common medium ---- human beings, both are functioned to satisfy human beings. The application of green technology in dance dresses still remains unknown whereas the use of environmental technology spreads quickly in the wide range of fields. This paper wants to discuss the possibility of introducing nanotechnology and the like into the manufacturing of dance dresses in order to discover more functions and values of green technology. In this paper, the author put forward all the wild imaginations as to the application of green technology in dance dresses. Though the imaginations are not realized now, the author optimistically believes that nothing is impossible. With those imaginations and developments of technology, the realization of the dream is not far.

Keywords Environment-friendly material; Nanotechnology; Dance dresses

INTRODUCTION

With increasing ecological and environmental awareness in the whole world, the application of environment-friendly material and green technology in different fields is common, and people's daily clothes are no exception. Clothes producers have paid increasing attention to "green clothes". In some developed nations, green clothes should carry certain signs for passing toxicology tests. Fashion designers also take material—one of the three factors of fashion design—as the winning point. Unfortunately, there are no producers or designers who ever paid attention to the application of green technology in dance dresses. The author, as a dancer on her own, tries to discuss the possibility of nanotechnology in dance dresses.

Environment-friendly material refers to the material passed tests endorsed by national authoritative testing institutions and achieved the environmental protection standard. In detail, environment-friendly material has three dimensions: firstly, production ecology, ie. green concept in the process of manufacture; secondly, user ecology, ie. being environment-friendly to users without any harm; thirdly, maintenance ecology, ie. being environment-friendly in cleaning and maintenance after the use of textiles or clothes. This paper is going to focus on the above-mentioned second point—user ecology—to discuss how environment-friendly material can be applied to dance dresses.

POSSIBILITIES OF THE APPLICATION OF NANOTECH IN DANCE DRESSES

The application of environment-friendly material in sports wear is quite well-known. And this can be borrowed into the thought of using environment-friendly material in the designing and manufacture of dance dresses. How green technology can be used maximally in dance dresses?

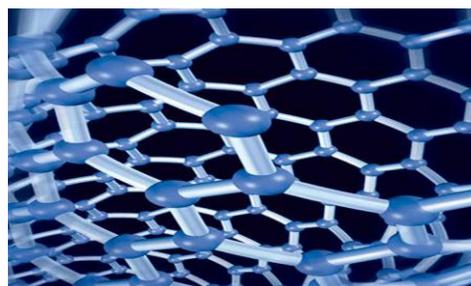


Figure 1. Internal structure of Nano material

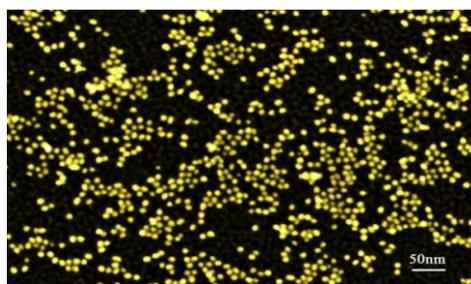


Figure 2. Nanoparticles tissues

This paper is going to analyze the possibility in both practical and functional aspects. First, dancing is an art. The performing clothes have been noted for color and style which not only satisfies the need for expressing the meaning of the scenario, but also satisfies the need for improving human taste. The

dancers should be trained in this way ,and their dresses should be distinguished from sports clothes. The application of nanotechnology in dance dresses should pay attention to the factors of aesthetics. Dance dresses used in dance training with many movements as stretching, rotating and jumping need high elasticity of the material. At present, cotton, high elastic spandex, cotton spandex, modal cotton and lycra texture are commonly used material for dance dresses. Pure cotton is comfortable for wearing, but it lacks elasticity and easily becomes loose. High elastic spandex is elastic, but not good at absorbing sweats, thus does some harm to wearers' skin. The rest of the above-listed material are much better than cotton and high elastic spandex, however, they are still not lacking bactericidal and anti-corrosion ability. Meanwhile, the research on green technology in the environment-friendly has already solved such problems as air permeability and elasticity. In the foreseeable future, the problem of lacking bactericidal and anti-corrosion ability will be solved.

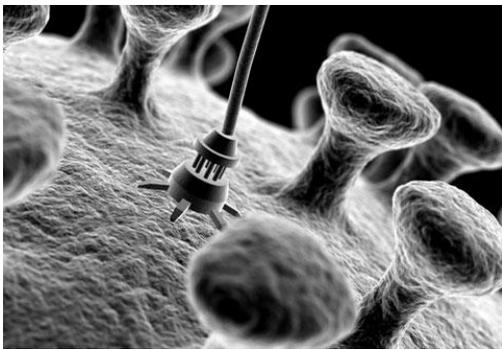


Figure 3. Enlarged nanoparticles



Figure 4. Nano material

Fortunately, there is interesting news that scientists are developing a new kind of clothes which will melt as soon as it is put into “water”. The “water” is not ordinary water, but a kind of diluted liquid soap. With this new technology, people need not wash clothes after wearing. They just dip dirty clothes into the diluted liquid soap and the clothes will soon melt into the water and dissolve without leaving any trace. This kind of clothes is made of special paper fibers with

chemical treatment in advance. Thus it will dissolve only in low concentration of liquid soap. People will refrain from the embarrassed situation of nakedness because the clothes will not dissolve in sweats or rain. The advantage of this paper fiber clothes is that it is easily and inexpensively made and dissolved. If this paper fiber can be introduced into designing and manufacture of dance dresses, dancers will be greatly freed from clothes-washing chores and heartedly enjoy the refreshment after the harsh training.

The dance dresses are thin and ventilating. With herbal ingredients implanted in it by technology, it can prevent the hurt of waists.



Figure 5. children's dance dresses

In training of dances, children are likely sweating which would cause allergy. With antibacterial function, nanotechnology can prevent the growth of bacteria in short time.

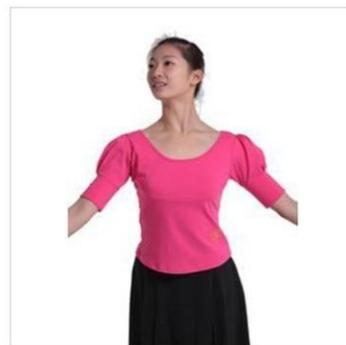


Figure 6. he dance dress of traditional Chinese dance

In talking green technology, nanotechnology cannot be overlooked. As the newest and most advanced item internationally, nanotechnology (“nanotech”) is the manipulation of matter on an atomic, molecular, and supramolecular scale. The earliest, widespread description of nanotechnology referred to the particular technological goal of precisely manipulating atoms and molecules for fabrication of macro-scale products, also now referred to as molecular nanotechnology. A more generalized description of nanotechnology was subsequently

established by the National Nanotechnology Initiative, which defines nanotechnology as the manipulation of matter with at least one dimension sized from 1 to 100 nanometers. Nanotech, as an applied science, is the outcome of the combination of the modern science (including physics, quantum mechanics, mesoscopic physics and molecular biology) and the modern technology (including computer technology, microelectronics technology, scanning tunneling microscopy technology and nuclear analysis technology), and it will trigger a series of development of new technology. Those technologies are widely used in various fields from smaller matters like cells to big issues like nuclear weapons. Why cannot nanotech be applied into the manufacture of dance dresses?



Figure 7. Dance dresses made of environment-friendly material

The highly expected functions of nanotech in dance dresses are as follows:

1. It can quickly adjust dancers' muscle fatigue in time to minimize muscle tension, and even help them to improve the ability of muscle movements, consequently, dancers can maintain the best training state for a long time.
2. It can soothe or help to deal with the injury in training. For the important parts or key joint like knees, ankles, cervical vertebra and lumbar vertebra, the new nanotech applied dance dresses can give specific and targeted treatment by designing or choices of material. Dancers are freed from waist belts, knee caps and cuffs and the morbidity of dancers' occupational diseases as arthritis, lumbar intervertebral disc herniation and soft tissue strain is greatly decreased.
3. Summer dance dresses are required to be light and breathable while winter dance dresses are required to be warm, light and elastic. For summer dresses, the material can be transparent to meet the requirement of dancers. And winter dresses can be added some herbal ingredients to give dancer's body a soft massage and also keep body warm.

4. The early warning function of nanotech will be widely used in the dance dresses. It is well known that the best treatment of disease is to prevent. The early warning function of nanotech can be applied in the dance dresses by showing all kinds of data reporting the health status of the dancer. And dancers can decide whether or not they will go on training.

DISCUSSION AND CONCLUSION

At present, all the above-mentioned ideas seem unrealistic. However, with the development of science and technology, those ideas will realize. The advance of technology always pushes forward an industry. Nanotechnology, intelligence technology and space technology render wild possibility of the innovation in clothes material. With nanotech, people can produce increasingly thinner material for dresses. With intelligence technology, people can produce smart material based on bionic concepts. Actually, the smart material is the material combining sensors and information processors and function drives in it. Since the advanced technology is widely used in other field, its application in designing and manufacture of dance dresses is possible. And this is the author's future research field.

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