

Preface

Glass, as one of the important artificial materials and a major vehicle for East–West cultural and technical exchange, has played a great role in the course of human civilization. Its origin and evolution attract the attention of archeologists and glass scientists worldwide.

The research on ancient Chinese glasses in China started in the middle of the last century. During the past 50 years, glass artifacts have been discovered frequently in excavated ancient tombs and ruins dating from the Qin and Han Dynasties to the Tang, Song, Yuan, Ming and Qing Dynasties, providing us with very important evidence and material for further study of ancient Chinese glasses. Chinese art historians and archeologists have systematically summarized the unearthed ancient Chinese glass artifacts and studied their excavation, historical background, shaping and emblazonry art, glass character, etc., and Chinese glass scientists have also become involved in the scientific research on unearthed ancient glass samples, not only through chemical composition analyses but also through technological studies, glass weathering and conservation, etc. Since the 1980s, several symposia have been held in China on the origin, technological provenances, and development of ancient Chinese glass, and many scientists and experts in glass archeology, both from home and abroad, have attended the symposia, which have made contributions to the ancient Chinese glass research in a worldwide context.

Many more ancient glasses were unearthed in the Yellow River and Yangtze River valleys, and these glasses have been studied

in greater detail. Many ancient glasses were unearthed in the south and southwest of China, as well as in the north and northwest. They are closely correlated with the ancient glass exchange between China and foreign countries along the Northwest, the Southwest and the Maritime Silk Road. These glasses had previously not been studied much, and in recent years we have emphasized research on them.

The Symposium on Ancient Glasses in Southern China was held in Nanning, Guangxi, on 16–19 December 2002. After the symposium more than 70 ancient glass artifacts and samples, provided by the museums and institutes of cultural relics and archeology in the south and southwest of China were measured and analyzed by the nondestructive analytical method in Shanghai. The proceedings of this symposium, entitled *Study on Ancient Glasses in Southern China*, was published by *Shanghai Scientific and Technical Publishers* in 2003. For the same purpose, the Symposium on Ancient Glasses in Northern China was held in Urumchi, Xinjiang, from 29 August to 6 September 2004. This symposium was supported by the Basic Research Division of the Chinese Academy of Sciences and the Cultural Heritage Bureau of Xinjiang Uygur Autonomous Region, and organized by the Special Glass Technical Committee, the Chinese Ceramic Society, the Xinjiang Turfanology Research Society and other related institutions. Art historians, archeologists and experts in the natural sciences from the following institutions attended the symposium and gave their presentations and research reports on the ancient glass artifacts excavated in the north and northwest of China: the Xinjiang Institute of Cultural Relics and Archeology, the Museum of Xinjiang Uygur Autonomous Region, the Cultural Heritage Bureau of Turfan, the Guyuan District Museum of Ningxia, the Ningxia Institute of Cultural Relics and Archeology, the Qinghai Institute of Culture Relics and Archeology, the Liaoning Institute of Cultural Relics and Archeology, the Inner Mongolia Museum, the Shanghai Institute of Optics and Fine Mechanics (CAS), the Shanghai Institute of Ceramics (CAS), Fudan University and Beijing University of Science and Technology. The discussion of the spread of ancient

glass and its distribution along the Northern (Desert) Silk Road and cultural exchange between the East and the West proceeded actively. The symposium has further promoted the collaborative research on the ancient glass in the north of China.

“The Silk Road” is a name given to a group of cultural, political and technological exchange routes linking up the East and the West. It played a significant role in ancient times. Zhangqian’s travels to the Western Regions were a magnificent undertaking that influenced the East–West exchange at that time, but long before his travels westward there had been primitive trade roads in the Euro-Asian region. Conservatively, it can be estimated that this occurred in the 10th century BC, between the Shang and the Zhou Dynasty in China. After Zhangqian’s travels, new transportation routes were explored between China and the outside world. China was the center of the Silk Road in Asia, but not the terminal. The Silk Road was extended from China to the Korean Peninsula, Japan and Southeast Asia. A few years ago, UNESCO identified four main routes of the Silk Road: (1) the Northern (Steppe) Route, (2) the Northwestern (Oasis) Route, (3) the Southern Maritime Route and (4) the Southwestern (Buddhist) Route.

Under the auspices of the Chinese Ceramic Society and the Technical Committee of Archaeology of Glass, the International Commission of Glass (TC-17, ICG), the Shanghai International Workshop on Archeology of Glass was held on 12 April 2005, in conjunction with the 2005 Shanghai International Symposium on Glass. The topic of the workshop was “Ancient Glass Along the Silk Road.” The purpose of this symposium was to bring together the archeologists, art historians and natural scientists interested in glasses found along the Silk Road, to learn from each other, to exchange ideas, and to plan for collaboration in the future. The participants in the workshop came from the Corning Museum of Glass (USA), the Pusan Museum (Korea), the National Academy of Arts of Uzbekistan, the Institute of Archeology, the Chinese Academy of Social Sciences, the Xinjiang Institute of Cultural Relics and Archeology, the Shanxi Institute of Archeology, the Shanghai Institute of Ceramics (CAS), the Shanghai Institute of Optics and

Fine Mechanics (CAS), Shanghai University, Fudan University and Beijing University of Science and Technology. Scientific papers and reports were also submitted by the China National Institute of Cultural Property, the Hepu Museum of Guangxi, the Guizhou Provincial Museum, the Inner Mongolia Museum, the Sichuan University Museum, etc. At this fruitful workshop, scientific materials and research results concerning the excavation background, historical profile, shaping art, outside character and chemical composition of ancient glass samples along the Northern (Oasis) Silk Road and Southern Maritime Silk Road were reported. A book containing the proceedings of both of the meetings mentioned above was published in Chinese by the Fudan University Press in June 2007. It reflects the newest research results on ancient glasses in Asia along the Silk Road.

I am very grateful to World Scientific for publishing the English edition of the above-mentioned book. To have more readers understanding the ancient glass research, an English version is necessary. So I invited Dr R. H. Brill of the Corning Museum of Glass to serve as a coeditor of this book to help me. I thank him for his active response and valuable support, which enhanced my confidence in accomplishing this work.

Based largely on the Chinese edition, I have made an effort to add some new advances to the contents and to provide as much information as possible in this book. In addition, six papers presented at the 2004 International Congress of Glass (held in Kyoto), which have not been published before, are included in this book. All these make the English edition more substantial and up to date.

Acknowledgment is made to the authors of this book for their contribution of papers and color photographs of unearthed glass artifacts. More than 80 color photos of ancient glass artifacts are shown in this book for the reader's reference and appreciation.

Thanks are due to my colleagues at the Shanghai Institute of Optics and Fine Mechanics for their assistance and cooperation, especially to Prof. Tian Shouyun, who served as a coeditor, checking and editing all the manuscripts, and to Prof. Gu Donghong, and also Mrs Zhao Hongxia, who took part in the work of organization,

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