

Table of Contents

Preface

Mirror Mold Reuse Techniques in Ancient East Asia

Y. Shimizu, T. Uno, F. Sugaya, T. Toyooka and K. Shimizu 1

Two Types of Iron Smelting Furnaces in Ancient Mongolia

T. Sasada and L. Ishtseren 7

Samurai's Swords, a Non-Invasive Investigation by Neutron Techniques

F. Salvemini, V. Luzin, M. Avdeev, A. Tremsin, A. Sokolova, A. Gregg, C.M. Wensrich, S. Gatenby, M.J. Kim and F. Grazzi 15

Decarbonizing Technique for Casting Iron to Make Wrought Iron Products in Northern Kyushu during the Yayoi Period

K. Miyamoto 25

Characterization of Early Iron-Production Technologies in Chungju, Korea

E. Lee 31

Technological Choice in a Medieval Japanese Sword

J.S. Lyons 41

A Scientific Study of Eastern Zhou Bronze Weapons with Tin-Rich Surface Decoration

Q.Y. Wang, Y. Chen and D.O. O'Flynn 47

The Many and Various Roles of Manganese in Iron and Steel Production

P.T. Craddock 57

Recent Advancing Scientific Examination on Ancient Metallurgical Remains of Chinese Paktong in Yunnan Province

C. Huang and J.L. Du 65

A Quantitative Analysis of Mine Mills by 3D Laser Scanner

H. Kuma, H. Fukuoka and M. Komatsu 73