

Fifth Forbes Symposium at the Freer Gallery of Art

Studies of Ancient Asian Metallurgy using Scientific Methods

Eugene and Agnes E. Meyer Auditorium, Freer Gallery of Art

October 28 and October 29, 2010

THURSDAY OCTOBER 28, 2010

8:30–9:00am **Coffee Reception/Registration**

9:00–9:15am **Introduction** (Eugene and Agnes E. Meyer Auditorium)

Southeast Asian Bronzes

- 9:15 am **Session Introduction: Questions about Southeast Asian Bronze Metallurgy**
Paul JETT, Freer Gallery of Art and Arthur M. Sackler Gallery, Smithsonian Institution
- 9:25 am **Tin-bronze – a Pan-Asian Technological Phenomenon – and the Development of Metallurgy in Southeast Asia**
Vincent C. PIGOTT, Institute of Archaeology, University College, London
- 10:00 am **Khmer Bronze Metallurgy during the Angkorian Period (12th-13th Century): Technical Investigation of a New Selected Corpus of Bronze Artifacts from the Phnom Penh National Museum**
Brice VINCENT, University of Paris III - Sorbonne Nouvelle; David BOURGARIT, Center for Research and Restoration of the French Museums(C2RMF), Paris, France
- 10:35 am **The Southeast Asian Lead Isotope Project at One Year: Studies in Regional Base Metal Production and Exchange**
Thomas Oliver PRYCE, RLAHA, Oxford University
- 11:10–11:40 am **Break** (Freer Gallery Courtyard)
- 11:40 am **The High-tin Bronzes of Thailand and their Relationships to those of India and East Asia**
Ian GLOVER, Institute of Archaeology, University College, London; Anna BENNETT, Analyseart, Brussels, Belgium
- 12:15 pm **Casting of Ancient Drums in North Vietnam**
TRINH Sinh, Institute Archaeology of Vietnam
- 12:50 pm **Metal Furnace-like Structures at Sawankhalok, Thailand**
Don HEIN, Independent Scholar and Archaeologist
- 1:00–2:30 pm **Lunch**

Chinese Bronzes

- 2:30 pm **Session Introduction: A Chemist Under a Spell: R. J. Gettens and Chinese Bronzes**
Francesca BEWER, Straus Center for Conservation, Harvard Art Museums, Cambridge, MA
- 2:50 pm **The Making of the Freer Chinese Bronze Book Volume Two**
W.T. CHASE, Chase Art Services, Woodstock, CT
- 3:25 pm **Theories and Observations: Still Looking at the Freer Bronzes**
Robert BAGLEY, Princeton University
- 4:00–4:30 pm **Break** (Freer Gallery Courtyard)
- 4:30 pm **Technical Studies of Chinese Bronze Vessels in the British Museum Collection**
Quanyu WANG, The British Museum
- 5:05 pm **Recent Research on Early Bronze Metallurgy in Northwest China**
Jianjun MEI, Lu SHEN, and Jianwei XU, University of Science and Technology, Beijing, China; Hui WANG, Gansu Institute of Archaeology and Cultural Relics, China
- 5:40–6:00 pm **Questions and discussion**
- 6:00–8:00 pm **Reception** (Freer Gallery Courtyard)

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Chinese Bronzes (continued)

- 9:00 am **An Enlightened Journey: Transitions in Casting of Chinese Buddhist Images**
Donna STRAHAN, The Metropolitan Museum of Art
- 9:35 am **Decorated Chinese Bronze Mirrors in the Cotsen Collection**
David SCOTT, UCLA/Getty Program in Archaeological and Ethnographic Conservation (presented by Vanessa MUROS, Staff Research Associate, UCLA/Getty Conservation Program)
- 10:10 am **Recent Discoveries Concerning Metallurgy in Bronze Age Yunnan**
Zhengyao JIN, Gong LI, Lifeng YAN, University of Science and Technology, Hefei, China; Zhilong JIANG, Yunnan Provincial Institute of Culture Relics and Archaeology, Kunming, China
- 10:45–11:15 am **Break** (Freer Gallery Courtyard)

West Asian Copper Alloys

- 11:15 **Session Introduction: Ten millennia of Copper Alloy Metallurgy in Western Asia: Influences and Interactions**
Paul CRADDOCK, The British Museum
- 11:35 am **Chalcolithic Crucible Smelting at Tal-i Iblis, Iran**
Lesley D. FRAME, Department of Materials Science and Engineering, University of Arizona
- 12:10 pm **Metallurgy During the Middle Chalcolithic (last third of the 5th millennium B.C.) in South Caucasus : an Insight through Recent Discoveries at Mentesh-Tepe (Azerbaijan)**
Antoine COURCIER, National Center of Scientific Research (CNRS), Paris, France
- 12:45–2:30 pm **Lunch**
- 2:30 pm **Zinc Alloys at Nuzi?: Dilemmas from an Early Collection**
Katherine EREMIN, Harvard Art Museums, Cambridge, MA; Andrew SHORTLAND, Centre for Archaeological and Forensic Analysis, Cranfield University, UK; Susanna KIRK, National Museums Scotland, UK; Megan RICHTERS, Centre for Archaeological and Forensic Analysis, Cranfield University, UK; Patrick DEGRYSE, Centre for Archaeological Sciences, Catholic University of Leuven, Belgium; Marc WALTON, The Getty Conservation Institute
- 3:05 pm **Techniques of Antique South Arabian Large Bronze Statues**
Benoit MILLE, Center for Research and Restoration of the French Museums (C2RMF), Paris, France
- 4:00 pm **Medieval Islamic Copper Alloys**
Susan LA NIECE, The British Museum; Rachel WARD, formerly the Department of Oriental Antiquities, The British Museum, Duncan HOOK, Paul CRADDOCK, The British Museum
- 4:35–5:15 pm **Closing Remarks and Coffee** (Freer Gallery Courtyard)

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