



the shortfall. The vast majority of fake "ancient" artifacts are crude enough to dismiss out of hand. But a small yet dangerously high percentage are made with sufficient skill and knowledge to fool even museum curators and top auction houses. The traditional defenses against fakes rely on art-historical methods and provenance. However, the art-historical approach can be highly subjective, and, like the objects themselves, provenance can be faked. A suite of truly objective, scientific tests for establishing an object's culture and date of creation is needed to complement these two approaches. Co-author Michael Teller is president of TK Asian Antiquities, one of the top dealers in the world and a leader in scientific examination of ancient artifacts, including gold jewelry. Handling thousands of Asian antiquities over more than 30 years has given him a healthy sense of skepticism. As he said in a recent interview, "The majority of [Asian] antiques, particularly ancient material on offer today, are forgeries, pastiches, and restructured artifacts. It is imperative to learn the appropriate scientific analytical techniques required to unveil these problems." He and co-author Melanie Roy (TK's Director of Research) have now provided a comprehensive survey of such methods, and its usefulness is by no means limited to Asian objects. You may already be familiar with carbon-14 testing for dating organics and thermoluminescence (TL) testing for dating ceramics. This book goes well beyond these two widely known methods. The book devotes a chapter to each of the following methods: Radiocarbon Dating; TL Testing, Radiography; Optical Microscopy; Metallography; Electron Probe Microanalysis and X-ray Fluorescence; Uranium, Thorium-Helium Analysis; Lead-210 Analysis; X-ray Diffraction; and Ultraviolet Scanning. There is also a chapter on an assortment of secondary testing techniques. Many of these techniques are relevant to authenticating ancient jewelry and metal ornaments. Each test method is explained, and its advantages, limitations, and proper application are discussed. These are illustrated with relevant case studies, including countermeasures attempted by the fakers. For example, if a modern fake is subjected to artificial irradiation (called "dose tampering"), is it possible for the fake to "pass" a TL test? The authors explain why that is "difficult to impossible." Clearly this is a technical book. And yet the writing is lucid and easily understandable by a general reader with little more than high-school science. Or perhaps you may want to jump to Mr. Teller's lively final chapter, entitled "Logic, Opinion, Divination and Myth in the Authentication Procedure." One by one he takes on various examples of fuzzy thinking that can delude collectors and appraisers when confronting an allegedly ancient object. Many readers may find this one chapter alone worth the price of the book. The book is beautifully produced, with text in English and Chinese and numerous color illustrations, many of them high-magnification photomicrographs. There are classy touches, including pictorial endpapers, all page edges gilt, and a bookmark ribbon. There is a glossary, but no index. This book is fascinating reading for anyone interested in archaeometry. It is destined to become a standard reference for collectors and curators who must confront ever more skillful makers of fake antiquities.

Eleven chapters of relevant scientific analytical and testing techniques used in the authentication of antiquities, including what science can and cannot do. An essay on "logic and opinion" in the authentication procedure finishes the text.