1. Record Nr. UNINA9910970725503321

Autore	Dillmann Philippe
Titolo	Corrosion of archaeological and heritage artefacts efc 45 : a special issue of corrosion engineering, science and technology / / by Philippe Dillmann
Pubbl/distr/stampa	Boca Raton, FL : , : Routledge, an imprint of Taylor and Francis, , [2017] ©2011
ISBN	1-351-19278-7 1-351-19279-5 1-351-19277-9
Edizione	[First edition.]
Descrizione fisica	1 online resource (113 pages) : illustrations, tables
Collana	European Federation of Corrosion Publications ; ; Volume 45
Disciplina	620.11223
Soggetti	Corrosion and anti-corrosives
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Cover -- Guest Editorial: Corrosion of archaeological arid heritage artefacts -- Intentional patina of metal archaeological artefacts: non-destructive Investigation of Egyptian and Roman museum treasures -- Electrochemically synthesised bronze patina: characterisation and application to the cultural heritage -- Improvement of corrosion stability of patinated bronze -- Silver artefacts: plasma deposition of SiOx protective layers and tarnishing evolution assessment -- On unexpected colour of lead sculptures in Queluz: degradation of lead white -- Long term corrosion of aluminium materials of heritage: analysis and diagnosis of aeronautic collection -- In situ measurement of oxygen consumption to estimate corrosion rates -- Protection of iron and steel in large outdoor industrial heritage objects -- Evaluation of new non-toxic corrosion inhibitors for conservation of iron artefacts -- Use of artificial metal coupons to test new protection systems on cultural heritage objects: manufacturing and validation -- Corrosion of iron from heritage buildings: proposal for degradation indexes based on rust layer composition and electrochemical reactivity -- Characterisation of corrosion layers formed on ferrous archaeological artefacts buried in anoxic media -- Microbiologically influenced corrosion process of archaeological iron nails from the sixteenth

century -- In situ structural characterisation of non-stable phases involved in atmospheric corrosion of ferrous heritage artefacts -- Measuring effectiveness of washing methods for corrosion control of archaeological iron: problems and challenges -- Influence of corrosion products nature on dechlorination treatment: case of wrought iron archaeological ingots stored 2 years in air before NaOH treatment -- Corroding glass, corroding metals: survey of joint metal/glass corrosion products on historic objects.
Long term assessment of atmospheric decay of stained glass windows.

Sommario/riassunto

"This special issue of Corrosion Engineering Science and Technology is dedicated to the study of corrosion of objects from historical sites. The issue contains contributions from the 2009 EUROCORR session on Corrosion of Archaeological and Heritage Artefacts organised by the European Federation of Corrosion's working party and commissioned articles on other key issues. The objective is to give the reader a broad understanding of corrosion of ancient materials, for the most part metal but also glass. Articles shed light on a range of analytical approaches related to the study of the complex systems that make up historical artifacts. In order to arrive at an understanding of the nanometric organisation of rust layers and interphases, such studies must be approached on a macroscopic scale. Techniques used include; macrophotography, synchrotron radiation and transmission electron microscopy (TEM) that ensure results that are both exhaustive and representative of particular observations. This issue demonstrates the wealth of approaches possible in the study of the corrosion of ancient materials."