



*metals*



*Special Issue Reprint*

## **Corrosion and Protection of Metals**

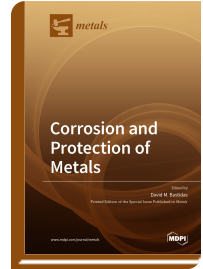
[www.mdpi.com/books/reprint/2860](http://www.mdpi.com/books/reprint/2860)

Edited by

David M. Bastidas

ISBN 978-3-03943-152-6 (Hardback)

ISBN 978-3-03943-153-3 (PDF)



Introduction and Scope—During the last few decades, an enormous effort has been made to understand corrosion phenomena and their mechanisms, and to elucidate the causes that dramatically influence the service lifetime of metal materials. The performance of metal materials in aggressive environments is critical for a sustainable society. The failure of the material in service impacts the economy, the environment, health, and society. In this regard, corrosion-based economic losses due to maintenance, repair, and the replacement of existing structures and infrastructure account for up to 4% of gross domestic product (GDP) in well developed countries. One of the biggest issues in corrosion engineering is estimating service lifetime. Corrosion prediction has become very difficult, as there is no direct correlation with service lifetime and experimental lab results, usually as a result of discrepancies between accelerated testing and real corrosion processes. It is of major interest to forecast the impact of corrosion-based losses on society and the global economy, since existing structures and infrastructure are becoming old, and crucial decisions now need to be made to replace them. On the other hand, environmental protocols seek to reduce greenhouse effects. Therefore, low emission policies, in force, establish regulations for the next generation of materials and technologies. Advanced technologies and emergent materials will enable us to get through the next century. Great advances are currently in progress for the development of corrosion-resistant metal materials for different sectors, such as energy, transport, construction, and health. This Special Issue on the corrosion and protection of metals is focused on current trends in corrosion science, engineering, and technology, ranging from fundamental to applied research, thus covering subjects related to corrosion mechanisms and modelling, protection and inhibition processes, and technologies.

Order Your Print Copy

You can order print copies at

[www.mdpi.com/books/reprint/2860](http://www.mdpi.com/books/reprint/2860)



MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



### **Open Access**

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



### **Author Focus**

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



### **High Quality & Rapid Publication**

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



### **High Visibility**

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



### **Print on Demand and Multiple Formats**

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.