

BOOK REVIEW

Materials degradation caused by acid rain, edited by ROBERT BABOIAN, published by American Chemical Society, price: \$ 79.95, export \$ 95.95, Clothbound, IX + 428 pp.

Although the natural environment has been given a considerable amount of attention as regards acid rain, recent studies point to its significant effect upon such materials as wood, metals, masonry, and paint. Economic and aesthetic concerns are involved: reduced service of common construction materials is primarily an economic consideration, but damage to art objects and historic buildings has a strong emotional context as well.

This book is divided into 5 following sections:

1. *Measurement and Monitoring of Atmospheric Deposition.* This section consists of 5 papers, in which the authors discuss mechanisms of acidification caused by deposition of SO_2 and NO_x , and dry deposition measurement techniques. Detailed field data from the literature are also presented for three types of collectors: filter paper with rainshields positioned overhead, Petri dishes, and flat Teflon of submicron particles.

2. *Metallic Corrosion.* This section consists of nine papers in which the authors discuss influence of acid deposition on atmospheric corrosion of metals, environmental effects on metallic corrosion products formed in short-term atmospheric exposures, corrosion rates as a function of space and time over the United States, environmental factors affecting corrosion of weathering steel, a laboratory evaluation of impact of NO_x and NO_2 on atmospheric corrosion of galvanized steel, effect of acid deposition on poulitice-induced automotive corrosion, exterior anodized aluminium automotive trim, and on indoor zinc and aluminium surfaces.

3. *Masonry Deterioration.* This section consists of seven papers in which the authors discuss interaction of acid rain with carbonate-rock surface, portland cement concrete structures, building made of bricks, monuments made of marble and bronze.

4. *Degradation of Organics.* This section consists of three papers in which the authors discuss effect of acid rain on painted wood surfaces and woody plants and their products. Degradation of nylon is also discussed.

5. *Economic Effects.* This section consists of five papers devoted to economic assessment of acid deposition damage on different materials and buildings in the U.S.A.

Most papers are written clearly, references are selected carefully and are up-to-date. Since the book is copied directly from the authors' manuscripts, lettering, figures and illustrations are not uniform. However, it is a minor disadvantage which affects rather aesthetics of the book.

The book will be useful for atmospheric chemists, materials scientists and engineers, environmental scientists, civil engineers, architects, and anyone interested in material studies. In addition, students interested in the environmental effects of acid rain will find the book valuable in the course of their education.

Lucjan Pawlowski