

the topics include “. . . any research that can lead to improvements in or protection of the quality of our air, water, and land.”

These contributions are broken into four major sections:

1. NO_x/SO_x Abatement—five papers
2. Water Treatment: Heavy Metal and Organic Removal—six papers
3. Catalytic Approaches to Organic Pollution Remediation—four papers
4. Waste Minimization: Recycle of Waste Plastics—two papers

Keane writes, “. . . the content is broad and encompasses subjects ranging from physical separations (e.g. adsorption, absorption, and ion exchange) to chemical reactions (e.g. catalytic oxidation and reduction, photocatalysis and sensing).”

I was particularly interested in the final two papers in the book as they dealt with the utilization of waste plastics. The first paper was entitled “Polymer Waste Recycling over Used Catalysts.” The authors note that polymer waste can be regarded as a potentially cheap source of chemicals and energy. That would be preferable to disposal in landfills where decomposition is minimal or incineration which is expensive and yields atmospheric pollutants. The second paper is entitled “Catalytic Dehalogenation of Plastic-Derived Oil.” The authors note that when PVC-containing mixed plastics and municipal plastic wastes are thermally degraded to obtain fuel oil, various chloro-organic compounds are formed. In this article, the authors demonstrated that their catalytic process can yield useable materials from these plastics after dehalogenation.

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Wiley Guide to Chemical Incompatibilities, 2nd Edition

Richard P. Pohanish and Stanley A. Greene, Wiley, New York, NY, 2003, 1294 pp., US\$ 125.00, ISBN 0-471-23859-7

This new edition of the Wiley Guide to Chemical Incompatibilities “. . . describes a wide range of chemical reactions that produce undesirable results in non-controlled situations such as toxic gases, fire, explosions, corrosive activity, polymerization, ruptured containers, and the creations of more dangerous compounds.” This book contains data on more than 11,000 chemical compounds that could be accessed in the event of an emergency.

The chemicals are arranged alphabetically and data are given for each chemical on whether that substance is incompatible with other common materials, other chemical substances, structural materials, or personal protective equipment. All entries include CAS numbers as well as corollary names of chemicals. “A substance’s incompatibility profile is based on the following information (as available): Incompatibility or reactions with common materials or conditions, including air and moisture. Incompatibility or binary reactions with other chemical substances. Incompatibility or reactions with structural materials such as metals, glass, concrete, etc. Incompatibility or reactions with protective materials such as plastics, rubber, and coatings. Information, as known, related to the ability of chemical substances to accumulate dangerous static electrical charges. The ability, when known,