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The papers in the "Proceedings" section are based upon the material the authors would have presented at the 2020 conference Architectural Plastics & Polymer Composites in the 21st Century: Design & Preservation of Contemporary & Historic Architecture that was cancelled due to the Covid-19 pandemic. Posters and the first section of supplemental material (Appendix A) follow the papers in this volume. The additional supplemental articles and items (Appendix B) and the CD – Understanding Polymeric Materials are contained in Volume II.

PROCEEDINGS

APPENDIX A – Posters & Supplemental Material #1

Some Plastics Timeline Highlights from the 1930s to the mid-1960s

Information Sources: A Few References on Life Cycle/Service Life Assessment, Achieving Near Zero/Net Zero Buildings, Energy Saving Methods/Materials for Buildings

NIST - BEES Online 2.1 – Building for Environmental and Economic Sustainability

Commonly Used Abbreviations for a Range of Plastics

Terminology – Brand/Trade Names of Some Commonly Used Plastics

Some Additional References – Books, Articles, Professional Societies

The POPART Project

Material Properties – A 3-D Slice through Material Property Space

Properties of Various Materials Used in Construction – Comparison Chart

Bridge Construction: Plastics Used in the Building of Vehicular & Pedestrian Bridges (Information on innovations in 3D equipment and printing of bridges is included.)

Halley VI Antarctic Research Station: GRP Cladding for an Extreme Environment
Hugh Broughton

PES Tensile Mesh with Protective PVC Coating for Ventilated Façade Screens, Sun Shades, and Other Applications (Details are provided on the material, plus case histories, e.g., the printed mesh façade screen of Rice University's new garage building.)

Polymeric Materials in the Restoration of Lost Architectural Details
David W. Torrey, AIA

Cast Steel Connections for Lightweight Structures
Castconnex

The Use of PVC in a Variety of Architectural Structures (Case histories involving educational, religious, industrial, airport, social club and athletic facilities as well as a pavilion and an art work installation are detailed.)

ETFE - Use as a building membrane/cladding material with information on applications including the monumental entertainment center in Kazakhstan and stadiums in New Zealand, Singapore, and the United States

Preserving Plastics in the Collection of the Harvard Art Museums
Georgina Raynor, Susan E. Costello, Angela Chang, and Elizabeth La Duc

The ArtLab: A Flexible Polycarbonate Building

Futuro: Rescue, Relocation, and Restoration Challenges
Milford Wayne Donaldson, FAIA

NOTE: Any paper, article, or other literature contained in Volume I or in Volume II that is not attributed to an author/authors, or to a company/organization, has been produced by Susan E. Schur for this publication.

Volume II
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Note: Volume I contains the "Architectural Plastics & Polymer Composites in the 21st Century" Conference Proceedings Plus papers, posters, and supplemental materials #1.

APPENDIX B
Supplemental Material #2

CD: Understanding Polymeric Materials

The CD contains the full content of 43 historic and contemporary publications.

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