Advanced Coating Symposium 2024

Cleveland, Ohio, USA 28 August 2024

ISBN: 979-8-3313-1415-6

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2024) by the TAPPI Press All rights reserved.

Printed with permission by Curran Associates, Inc. (2025) For permission requests, please contact the TAPPI Press



at the address below.

TAPPI Press 15 Technology Parkway South Peachtree Corners, Georgia 30092

Phone: (800) 332-8686 Fax: (770) 446-6947

memberconnection@tappi.org

Additional copies of this publication are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 USA Phone: 845-758-0400

Phone: 845-758-0400 Fax: 845-758-2633

Email: curran@proceedings.com Web: www.proceedings.com

TABLE OF CONTENTS

SESSION 1: UNIQUE COATING CONSIDERATIONS

Investigating the Self-assembly of Lignin-siloxande Co-oligomers to Develop Amphiphobic Paper Coatings	1
Kalavathy Rajan	
Enhancing Surface and Barrier Properties of Paper and Packaging Materials Through Mechanical Modifications and Biobased Coating Applications	14
SESSION 2: BARRIER COATING CONCEPTS	
Comparison of the Application of Polysaccharide-based Barrier Coating on Paper and Board via Fimpress and Spray Coating	27
Modifications and Applications of Nanocellulose to Enhance Barrier Performance of Packaging Materials	38
Sustainable Oxygen Barrier Coatings for Paper Based on Anionic and Cationic Cellulose-Derived Materials Jonathan Rhone	51
Roll-to Roll Processing of Paper Based Packaging Materials Using Cellulose Nanocrystals and Chitosan	59
Samuel Fagbemi	
KEYNOTES: SPEAKER DR. LOKENDRA PAL	
Water-Based Adhesive Penetration into Paperboard and Coated Paperboard	63
Modified Hemicelluloses as Stabilizers for Talc Slurries for Paper Coating Applications	74
Heat Sealing of Barrier Coated Papers	88
Author Index	