

THE

Journal

OF THE AMERICAN
LEATHER CHEMISTS ASSOCIATION

January 2022

Vol. CXVII, No.1

JALCA 117(1), 1-44, 2022



116th Annual Convention

to be held at the
Eaglewood Resort & Spa
1401 Nordic Road
Itasca, IL 60143

DATE CHANGE:
June 21-24, 2022

For more information go to:
[leatherchemists.org/
annual_convention.asp](http://leatherchemists.org/annual_convention.asp)

Contents

Salt-free Chromium Tanning: Practical Approaches by M. Sathish, R. Aravindhan and J. Raghava Rao	3
Improving Tearing Resistance of Leather - Part 2 Prevention and Treatment of Low Tearing Strength in the Tannery by Ricardo Tournier and Fernando Lado	10
A Cleaner Process for Short-Term Preservation of Hides using Wheat Bran by Josep M. Morera, Esther Bartolí, Rafael Fernández and Luisa F. Cabeza	19
Extract of <i>Trema Orientalis</i> (L.) Stem Bark: A Potential Source of Environmentally Friendly Tanning Agent for Leather Industry by Murshid Jaman Chowdhury, Md. Abdur Razzaq, Md. Imran Biswas, Ariful Hai Quadery and Md. Tushar Uddin	28
ACLA Fall Council Meeting Minutes	38
Lifelines	42
Call for Papers	44

Distributed by



An imprint of the University of Cincinnati Press

ISSN: 0002-9726

Communications for Journal Publication

Manuscripts, Technical Notes and Trade News Releases should contact:
MR. STEVEN D. LANGE, Journal Editor, 1314 50th Street, Suite 103, Lubbock, TX 79412, USA
E-mail: jalcaeditor@gmail.com Mobile phone: (814) 414-5689

Contributors should consult the Journal Publication Policy at:
http://www.leatherchemists.org/journal_publication_policy.asp

Beamhouse efficiency takes perfect balance.

Making leather on time, on spec and within budget requires a careful balance of chemistry and process. Buckman enables tanneries to master that balance with our comprehensive Beamhouse & Tanyard Systems. They include advanced chemistries that not only protect the hide but also maximize the effectiveness of each process, level out the differences in raw materials and reduce variations in batch processing. The result is cleaner, flatter pelts. More uniform characteristics. And improved area yield.

In addition, we offer unsurpassed expertise and technical support to help solve processing problems and reduce environmental impact with chemistries that penetrate faster, save processing time, improve effluent and enhance safety.

With Buckman Beamhouse & Tanyard Systems, tanneries can get more consistent quality and more consistent savings. Maintain the perfect balance. Connect with a Buckman representative or visit us at Buckman.com.

1945
2020 **Buckman75**

JOURNAL OF THE AMERICAN LEATHER CHEMISTS ASSOCIATION

Proceedings, Reports, Notices, and News
of the
AMERICAN LEATHER CHEMISTS ASSOCIATION

OFFICERS

MIKE BLEY, *President*
Eagle Ottawa – Lear
2930 Auburn Road
Rochester Hills, MI 48309

JOSEPH HOEFLER, *Vice-President*
The Dow Chemical Company
400 Arcola Rd.
Collegeville, PA 19426

COUNCILORS

Shawn Brown
Quaker Color
201 S. Hellertown Ave.
Quakertown, PA 18951

Steve Lange
Leather Research Laboratory
University of Cincinnati
5997 Center Hill Ave., Bldg. C
Cincinnati, OH 45224

John Rodden
Union Specialties, Inc.
3 Malcolm Hoyt Dr.
Newburyport, MA 01950

Jose Luis Gallegos
Elementis LTP
546 S. Water St.
Milwaukee, WI 53204

LeRoy Lehman
LANXESS Corporation
9501 Tallwood Dr.
Indian Trail, NC 28079

Marcelo Fraga de Sousa
Buckman North America
1256 N. McLean Blvd.
Memphis, TN 38108

EDITORIAL BOARD

Dr. Meral Birbir
Biology Department
Faculty of Arts and Sciences
Marmara University
Istanbul, Turkey

Chris Black
Consultant
St. Joseph, Missouri

Dr. Eleanor M. Brown
Eastern Regional
Research Center
U.S. Department of Agriculture
Wyndmoor, Pennsylvania

Dr. Anton Ela'mma
Retired
Perkiomenville, Pennsylvania

Cietta Fambrough
Leather Research Laboratory
University of Cincinnati
Cincinnati, Ohio

Mainul Haque
ALCA Education
Committee Chairman
Rochester Hills, Michigan

Joseph Hoefler
Dow Chemical Company
Collegeville, Pennsylvania

Elton Hurlow
Buckman International
Memphis, Tennessee

Prasad V. Inaganti
Wickett and Craig of America
Curwensville, Pennsylvania

Dr. Tariq M. Khan
Research Fellow, Machine Learning
Faculty of Sci Eng & Built Env
School of Info Technology
Geelong Waurin Ponds Campus
Victoria, Australia

Nick Latona
Eastern Regional Research Center
U.S. Department of Agriculture
Wyndmoor, Pennsylvania

Dr. Xue-pin Liao
National Engineering Centre for Clean
Technology of Leather Manufacture
Sichuan University
Chengdu, China

Dr. Cheng-Kung Liu
Eastern Regional Research Center
U.S. Department of Agriculture
Wyndmoor, Pennsylvania

Dr. Rafea Naffa
New Zealand Leather & Shoe
Research Association Inc. (LASRA*)
Palmerston North, New Zealand

Edwin Nungesser
Dow Chemical Company
Collegeville, Pennsylvania

Dr. Benson Ongarora
Department of Chemistry
Dedan Kimathi University of Technology
Nyeri, Kenya

Lucas Paddock
Chemtan Company, Inc.
Exeter, New Hampshire

Dr. J. Raghava Rao
Central Leather
Research Institute
Chennai, India

Andreas W. Rhein
Tyson Foods, Inc.
Dakota Dunes, South Dakota

Dr. Majher Sarker
Eastern Regional
Research Center
U.S. Department of Agriculture
Wyndmoor, Pennsylvania

Dr. Bi Shi
National Engineering Laboratory
Sichuan University
Chengdu, China

Dr. Palanisamy Thanikaivelan
Central Leather
Research Institute
Chennai, India

Dr. Xiang Zhang
Genomics, Epigenomics and
Sequencing Core
University of Cincinnati
Cincinnati, Ohio

Dr. Luis A. Zugno
Buckman International
Memphis, Tennessee

PAST PRESIDENTS

G. A. KERR, W. H. TEAS, H. C. REED, J. H. YOCUM, F. H. SMALL, H. T. WILSON, J. H. RUSSELL, F. P. VEITCH, W. K. ALSOP, L. E. LEVI, C. R. OBERFELL, R. W. GRIFFITH, C. C. SMOOT, III, J. S. ROGERS, LLOYD BALDERSO, J. A. WILSON, R. W. FREY, G. D. McLAUGHLIN, FRED O'FLAHERTY, A. C. ORTHMANN, H. B. MERRILL, V. J. MLEJNEK, J. H. HIGHBERGER, DEAN WILLIAMS, T. F. OBERLANDER, A. H. WINHEIM, R. M. KOPPENHOEFER, H. G. TURLEY, E. S. FLINN, E. B. THORSTENSEN, M. MAESER, R. G. HENRICH, R. STUBBINGS, D. MEO, JR., R. M. LOLLAR, B. A. GROTA, M. H. BATTLES, J. NAGHSKI, T. C. THORSTENSEN, J. J. TANCOS, W. E. DOOLEY, J. M. CONSTANTIN, L. K. BARBER, J. J. TANCOS, W. C. PRENTISS, S. H. FAIRHELLER, M. SIEGLER, F. H. RUTLAND, D.G. BAILEY, R. A. LAUNDER, B. D. MILLER, G. W. HANSON, D. G. MORRISON, R. F. WHITE, E. L. HURLOW, M. M. TAYLOR, J. F. LEVY, D. T. DIDATO, R. HAMMOND, D. G. MORRISON, W. N. MULLINIX, D. C. SHELLY, W. N. MARMER, S. S. YANEK, D. LEBLANC, C.G. KEYSER, A.W. RHEIN, S. GILBERG, S. LANGE, S. DRAYNA, D. PETERS

THE JOURNAL OF THE AMERICAN LEATHER CHEMISTS ASSOCIATION (USPS #019-334) is published monthly by The American Leather Chemists Association, 1314 50th Street, Suite 103, Lubbock, Texas 79412. Telephone (806)744-1798 Fax (806)744-1785. Single copy price: \$8.50 members, \$17.00 non-member. Subscriptions: \$185 for hard copy plus postage and handling of \$60 for domestic subscribers and \$70 for foreign subscribers; \$185 for ezine only; and \$205 for hard copy and ezine plus postage and handling of \$60 for domestic subscribers and \$70 for foreign subscribers.

Periodical Postage paid at Lubbock, Texas and additional mailing offices. Postmaster send change of addresses to The American Leather Chemists Association, 1314 50th Street, Suite 103, Lubbock, Texas 79412.

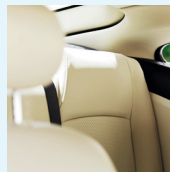


Stahl's innovations driven by sustainability

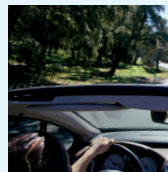
With the rise of both electric and self-driving, cars are becoming quieter and anti-squeak and rattle materials are becoming increasingly important. At the same time, improved anti-stain performance is required, because of the current trend for pale-colored car seats. Therefore, we have developed Stay Clean. This low-VOC coating technology protects pale-colored leather and vinyl surfaces against common stains, such as dye from jeans, spilled coffee and dirt. Our solution also makes surfaces low-squeak, which is a great asset as global research has shown that a squeaking car interior is one of the biggest annoyances among car owners. Another trend in car interior is the popularity of matt surfaces. Therefore, we have developed PolyMatte®. This non-squeaking solution provides a luxurious feel to the finished article in combination with flexibility and scratch and abrasion resistance. Our portfolio contains many products, varying from beamhouse products, tanning systems to finishes,

duller concentrates, crosslinkers and thickeners to leveling agents, defoamers, colorants and hand modifiers. Our most sustainable option is Green PolyMatte®, which is based on rapeseed oil (20%) instead of crude oil-derived intermediates. If you would like to know what our Stahl solutions for automotive can do for your business, please visit www.stahl.com or contact us at: alexander.campbell@us.stahl.com.

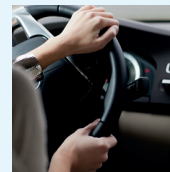
If it can be imagined, it can be created



Stay Clean



Low-VOC



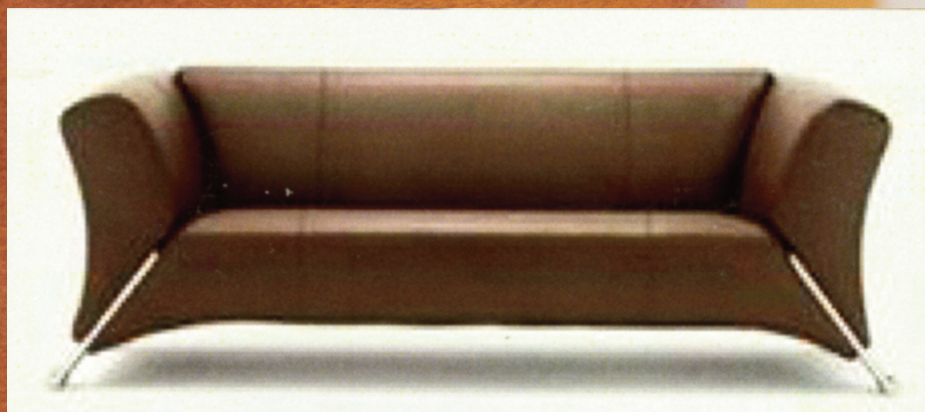
PolyMatte®

LEATHER

AVELLISYNCO



Selected Dyestuffs



 **CHEMTAN**

17 Noble Farm Drive • Lee, NH 03861 (Office)
57 Hampton Road • Exeter, NH 03833 (Manufacturing)
Tel: (603) 772-3741 • Fax: (603) 772-0796
www.CHEMTAN.com



C O L D M i l l i n g



Smooth Leather
Milling



Erretre s.p.a. | Via Ferraretta, 1 | Arzignano (VI) 36071 | tel. +39 0444 478312 | info@erretre.com

Celebrating
75 Years
1941-2016

UNION
Specialties, Inc.

**The power of water-based
polyurethane technology**

3 Malcolm Hoyt Dr. Newburyport, MA 01950, USA. Certified ISO 9001:2015
Tel: +1 978-465-1717 Fax: +1 978 465-4194 E-mail: union@unionspecialtiesinc.com

www.unionspecialtiesinc.com

**COUNCIL CONFERENCE CALL MINUTES
AMERICAN LEATHER CHEMISTS ASSOCIATION
FALL COUNCIL MEETING**

November 11, 2021

Present

Officers:	Mike Bley, Joe Hoefler
Council Members:	Shawn Brown, Jose Gallegos, Steve Lange, Lee Lehman, and John Rodden
Executive Secretary:	Carol Adcock

1. WELCOME. President Mike Bley called the meeting to order. He hoped everyone was doing okay and that the Convention would be able to be held next year. It was determined that a quorum was present.

2. MINUTES. All previous minutes have been approved by Council.

3. 2022 UPDATE OF ANNUAL CONVENTION. Bill Clippinger, 2022 Convention Chair, was absent so Mrs. Adcock gave the following report regarding the 2022 Annual Convention preparations:

Contract Provisions

The 2022 site will be Eaglewood Resort & Spa, Itasca, IL, June 21-24. A deposit of \$2,000 is on file with Eaglewood with another \$1,500 being due 12/31/2021, another \$2,000 due 5/17/2022 and a final deposit of \$2,000 due 6/20/2022.

The rates will be as follows:

Single	\$415.54 per night, inclusive
Double	\$568.58 per night for two, inclusive

Rates quoted are per night and include lodging, breakfast, lunch, dinner, all taxes and amenity fee. Package begins with lunch on day of arrival and ending with breakfast on day of departure. He stated that the deadline for reservations is Friday, May 27, 2022.

The rates for pre/post arrival are as follows:

Single/Double	\$189 per room plus taxes and fees = \$209.37
---------------	---

Rates for early arrival include accommodation only.

Schedule

The tentative schedule for the convention was previously emailed to Council. It is identical to the 2018 convention at Eaglewood. Mrs. Adcock will contact Buckman to see if they are interested in sending their golf analyzer as in previous years.

Mr. Lehman was asked to talk to Council about a proposal from Sarah Drayna concerning the LACA and its next meeting in Chicago. Discussion followed about combining their meeting with our annual convention. Council felt it needed more facts and details. Mr. Lehman will speak to Mrs. Drayna and Mr. Hoefler will talk to Steve Sothmann about this.

Entertainment

Bowling at Kegler's is scheduled on Wednesday evening, June 22. There is also darts and pool tables plus an open bar for most of the evening as well as food.

Sponsorship Campaign

Mrs. Adcock reported that the sponsorship campaign for 2022 will be the same as the one for 2019. Donis Bosworth as Convention Vice Chair will start the campaign in early 2022.

Sports and Social Coordinator

Mrs. Adcock reported that Mr. Clippinger does not need a Social Coordinator for 2022, but he will ask someone to be the Sports Coordinator for the golf tournament.

Proposed Budget

A proposed budget for the 2022 convention was emailed to Council for their review. It was reviewed during the call. Motion was made, seconded and unanimously passed to approve such budget as presented.

AV Person

Mr. Clippiner will find an AV Coordinator for 2022.

Technical Program – Joe Hoefler, Chair

Mr. Hoefler will start contacting those who agreed to give a paper in 2020 or 2021 and see if they are still willing to present. He reported that several of his past commitments have retired so the number of papers he has may be reduced. Council will help get confirmed presenters. Mr. Hoefler plans to complete the program no later than early March.

Wilson Lecture – David Peters, Chair

Randy Johnson with GST AutoLeather, Inc. will present the 2022 Wilson Lecture. He was informed of the date change and has agreed to giving it on June 22. Mrs. Adcock will contact him about a name change for his company and make sure he has the guidelines for the lecture.

Alsop Award – Joseph Hoefler, Chair

The 2022 recipient of the O'Flaherty Service Award was submitted to Council earlier and the recipient has been approved by Council.

O'Flaherty Service Award – Sarah Drayna, Chair

The 2022 recipient of the O'Flaherty Service Award was submitted to Council earlier and the recipient has been approved by Council.

2023 Convention Site

Mrs. Adcock reminded Council of Mr. Clippinger's previous suggestions about returning to Grandover Resort in Greensboro, NC for our next convention. He felt it might be easier to return to a previous convention site since he is new to this position. The convention was held at Grandover in 2003, 2008 and 2012. He also recommended the site due to its close location to the hotel and the fact that the hotel provided a shuttle from the airport to the hotel. Previously Council had suggested that Houston might be a possible site since Mr. Clippinger officed there. It was also felt that a Houston site might encourage people from Mexico to attend and would be easier for international participants. Council would like Mr. Clippinger to look into Grandover as well as sites in Houston and report back to Council in the next few months. Dates for the convention will be dependent on rates, but it was suggested that the end of the month was not a good date for the convention as people might be leaving on vacation by then. Room nights for the convention will be as usual, namely 25 for Monday night, 60 for Tuesday and Wednesday nights, and 50 for Thursday night.

4. FINANCIAL REPORTS – Carol Adcock

Year to Date Financial Reports

Council reviewed the Profit and Loss Statement and Balance Sheet through October 31, 2021.

The Membership Breakdown as well as a dues and subscriptions breakdown for 2022 was handed out and reflected the following:

119 Active, 44 Active Life, 4 Active Life Mutual, 20 Active Life Retired, 13 Active Mutual, 39 Active Retired, 1 Student, and 31 SLTC along with 2 SLTC Students, for a total of 273 members. Out of the above membership that is anticipated for 2022, dues will be collected from 125 paying members, excluding the dues that will be collected from the SLTC members. The list of canceled memberships was reviewed. There are 50 subscriptions that have been invoiced for renewal for 2022.

Mrs. Adcock also noted that 1 advertiser in the Journal for 2022 has agreed to advertise again in 2022 and has paid. She will be contacting the other 4 advertisers to see if they will also advertise in 2022. She also hopes to contact new companies about advertising.

Motion was made, seconded and passed to accept the Financial Reports as submitted.

A rough draft of the 2022 Association Budget was reviewed. Mrs. Adcock noted there was no need for the Lollar award as the next IULTCS Congress will not be until 2023. Discussion was held with a motion being made, seconded and carried to approve the 2022 proposed Association Budget after taking the Lollar Award off. The revised budget is attached to these minutes.

5. EDITOR'S WRITTEN REPORT – Steve Lange

November 10, 2021

Dear ALCA Officers and Councilors:

We are on track to publish 46 papers in 2021. Seven papers rejected have been rejected in 2021. The flow of papers has increased along with the diversity of the topics. Currently, have full issues assigned through April 2022, basically a six month window. This seems like too long of a buffer. My understanding of previous years is that the buffer ranged from 3 to 4 months. The Editorial Review board is working on 8 papers. Reviews for 9 papers have gone back to authors for revision. Twenty papers are pending publication. For 2020 and 2021 to date, the Top Ten Abstract and Article views are summarized on the next page.

Respectfully submitted,
Steven D. Lange, *Journal* Editor

Mr. Lange also submitted a JALCA Website Analysis from January 2020 to November 10, 2021. It reflected the top ten article abstracts viewed, with the top receiving 399 views. The chart also reflected the top ten whole article views, with the top one receiving 59 views.

Discussion followed regarding the number of papers being submitted for publication. Mr. Lange reported that it had been down so he only published three papers in the March and April issues. However, there has been an increase in papers and he has been able to do the usual 4 papers every since. He also reported that he has enough papers to do 5 per issue for a little while. It was felt that we should keep to the 4 papers per issue to see if the flow of papers continues.

Motion was made, seconded and unanimously passed to accept the Editor's Report as written.

6. WAYS AND MEANS COMMITTEE REPORT – Shawn Brown and Steve Schroeder

Mr. Brown submitted the following written report:

Here is some of the highlights and overall review of the plan:

Balance on January 1, 2021: \$198,658.70

Withdrawals during 2021 (so far, through Nov 3, 2021): \$47,978.

Current balance as of Nov 3, 2021: \$191,709.21

The overall gross return of the account (strictly performance), the account has been up +20.65% year to date.

Obviously, the withdrawals although necessary for the operations of the ALCA have consumed all the growth.

Current portfolio allocation is:

Approx. 19% - Home Depot stock - have a large gain on this position and current dividend yield is approx. 1.80%

Mutual funds allocation:

Approx. 23% is in Growth Fund of America (growth / equity oriented)

Approx. 29% is in American Balanced Fund (which is 50% growth / equity and 50% cash / money market / fixed income bonds)

Approx. 25% is in Washington Mutual Fund (which is a blue chip, high dividend paying fund with a growth / equity / value-oriented blend)

Approx. 4% is in money market / cash account

Overall profit on the account overtime (despite the withdrawals) is:

Total invested: \$107,158.57 and current value is \$191,709.21

The portfolio managers are not suggesting any changes to the allocation of the portfolio at this time.

Best Regards,

Shawn Brown

Discussion followed regarding how well the portfolio was doing. Mrs. Adcock pointed out that it had made a significant gain between the end of September and the end of October.

Motion was made, seconded and unanimously passed to accept the Editor's Report as written.

7. TECHNICAL COMMITTEE REPORT

Since there is no current chair of the technical committee, no formal report was submitted. Mrs. Adcock reported that the Education Subcommittee was still overseeing the Leather Correspondence Course and the Methods and Specifications Subcommittee was still overseeing the Randall Rowles Memorial Scholarship. The Chair of the Education Committee had asked for his 2022 dues to be waived as he was unemployed. Motion was made, seconded and unanimously approved that his dues be waived for 2022 for his service to the Association.

It was agreed that Council will discuss the future of the Technical Committees at their next meeting during the convention in June.

8. NOMINATING COMMITTEE REPORT – David Peters, Chair

Mrs. Adcock had contacted Mr. Peters prior to the meeting. He has asked to be replaced as Chair of the Nominating Committee as he is now retired. The committee did have a Vice President Candidate and he is still willing to serve. There is still a need for four Councilor candidates. It was felt that a replacement needed to be found for Mr. Peters and that it should be a former President of the ALCA according to the guidelines for the committee. Council will be working on this.

9. OLD BUSINESS

Finances of the Association

The finances of the Association are doing pretty well since dues and subscriptions for 2022 are starting to be paid.

10. NEW BUSINESS

There was no new business to come before Council.

11. LOCATION AND DATE OF NEXT COUNCIL MEETING

It was felt that another conference call was needed in early February. A date will be circulated closer to that date.

There being no further business before Council, the meeting was adjourned.

Respectfully submitted,

Carol Adcock, Executive Secretary

THE AMERICAN LEATHER CHEMISTS ASSOCIATION
2022 BUDGET
 Approved November 11, 2021

INCOME:

Advertising	\$16,812.00
Copyright Income	500.00
Correspondence Course	3,000.00
Dues	30,275.00
Postage & Handling	2,700.00
Reprints/Articles	500.00
Subscriptions	11,500.00
Registration	22,750.00
Sponsorships	32,000.00
Dividend	<u>3,000.00</u>

Total Income**\$123,037.00****EXPENSES:**

Bank Wire fee	350.00
Bank Service Charges	25.00
Copyright	780.00
Communication Expenses	
Website	1,000.00
Fax	130.00
Telephone	900.00
Credit Card Processing Fees	3,000.00
Discounts Given	1,900.00
Dues & Subscriptions	480.00
Insurance Expense	
Businessowners Coverage	450.00
Employee Dishonesty	191.00
Worker's Compensation	335.00
License, Fees, and Permits	30.50
Membership Development	20,000.00
Office Expenses: Supplies	1,500.00
Office Expenses: Postage	525.00
Office Expenses: Printing & Postage	27,000.00
Office Expenses: Rent	8,100.00
Payroll Expenses	
Gross Wages	49,644.00
FICA	3,077.93
Medicare	719.84
Professional Fees	
Accounting	1,200.00
Editor	15,600.00
Rowles Scholarship Fund	<u>500.00</u>

Total Expenses**\$137,438.27****NET INCOME/LOSS****(\$ 14,401.27)**

CALL FOR PAPERS



FOR THE 116th ANNUAL CONVENTION OF THE
AMERICAN LEATHER CHEMISTS ASSOCIATION

Eaglewood Resort & Spa, Itasca, Illinois

June 21-24, 2022

If you have recently completed or will shortly be completing research studies relevant to hide preservation, hide and leather defects, leather manufacturing technology, new product development, tannery equipment development, leather properties and specifications, tannery environmental management, or other related subjects, you are encouraged to present the results of this research at the next annual convention of the Association to be held at the Eaglewood Resort & Spa, Itasca, Illinois, June 21-24, 2022.

Abstracts are due by April 1, 2022

Full Presentations are due by June 1, 2022

They are to be submitted by e-mail to the
ALCA Vice-President and Chair of the Technical Program:

JOSEPH HOEFLER

The Dow Chemical Company

400 Arcola Rd.

Collegeville, PA 19426

E-mail: jhoefler@dow.com

The **ABSTRACT** should begin with the title in capital letters, followed by the authors' names. An asterisk should denote the name of the speaker, and contact information should be provided that includes an e-mail address. The abstract should be no longer than 300 English words, and in the Microsoft Word format.

FULL PRESENTATIONS at the convention will be limited to 25 minutes. In accordance with the Association Bylaws, all presentations are considered for publication by *The Journal of the American Leather Chemists Association*. They are not to be published elsewhere, other than in abstract form, without permission of the *Journal* Editor. For further paper preparation guidelines please refer to the *JALCA* Publication Policy on our website: leatherchemists.org

Full Presentations are to be submitted by e-mail to the *JALCA* editor:

STEVEN D. LANGE, *Journal* Editor

The American Leather Chemists Association

E-mail: jalcaeditor@gmail.com

Mobile Phone (814) 414-5689



**116th ALCA
ANNUAL CONVENTION
June 21-24, 2022
Eaglewood Resort & Spa
Itasca, IL**

Featuring the 61st John Arthur Wilson Memorial Lecture

“Road Ahead”

By Randy Johnson, President and CEO

P A N G E A

Formerly GST Seton

Tentative Schedule

Tuesday, June 21

Golf Tournament, Opening Reception and Dinner

Wednesday, June 22

***John Arthur Wilson Memorial Lecture
All Day Technical Sessions, Fun Run
Reception and Dinner, Activities - Bowling, Pool,
Darts and an Open Bar***

Thursday, June 23

***All Day Technical Sessions, Annual Business Meeting
Activities Awards Luncheon
Social Hour, ALCA Awards Banquet***

***Visit us at www.leatherchemists.org for full details
under Annual Convention as they become available***

Sometimes Safety Begins with Reflection



Chemtan®
Reflect V-100



 **CHEMTAN**

Tel: (603) 772-3741 • www.CHEMTAN.com