

**CURRICULUM VITAE FOR DAVID E. LEWIS****EDUCATION:**

University of Adelaide; Adelaide, South Australia.

B.Sc. 1972; chemistry.

B.Sc. (Hons.) 1973; organic chemistry [1st Class]

Ph.D. 1980; organic chemistry.

D.Sc. 2012; chemistry.

**SCHOLARSHIPS, PRIZES, HONORS, ETC.:**

Commonwealth Secondary Scholarship 1966-1968. Commonwealth University (Open Entrance) Scholarship

1969-1972. Commonwealth Postgraduate Research Award 1973-1976.

The Union Carbide Prize in Chemistry 1971

The Rennie Scholarship for Research in Chemistry 1972.

Distinguished Visiting Scholar, University of Adelaide 6/88-7/88

Outstanding Paper Award, American Chemical Society Division of the History of Chemistry, 1997.

HIST-2010 Outstanding Paper Award, American Chemical Society Division of the History of Chemistry, 2011.

2019 Paul R. Jones Outstanding Paper Award, 2022.

UW-Eau Claire WiSys Innovation Scholar Award 2005.

Award for Outstanding Contributions to Chemistry, Central Wisconsin Section, American Chemical Society

2006. Award for Service to the Central Wisconsin Section, American Chemical Society 2010

Inaugural WisMEF Innovation Scholar Award, 2012

International Fellow, UW-Eau Claire, 2015, 2017

University Faculty Excellence in Scholarship Award, 2016

2018 HIST Award for Outstanding Achievement in the History of Chemistry (presented by the ACS Division of the History of Chemistry)

2019 Markovnikov Medal and Diploma (presented by Lomonosov Moscow State University)

**PROFESSIONAL HISTORY:**

University of Arkansas, Fayetteville, AR 72701.

Research Associate 1977-1978; Lecturer 1/79-5/80.

University of Illinois at Urbana-Champaign, Urbana, IL 61801.

Research Associate 6/80-8/80; Visiting Assistant Professor 6/80-6/81.

Baylor University, Waco, TX 76798.

Assistant Professor 7/81-5/88; tenure 1988; Associate Professor 6/88-12/88

South Dakota State University, Brookings, SD 57007.

Associate Professor 1/89-8/93; tenure 1993; Professor 8/93-5/97

University of Wisconsin – Eau Claire, Eau Claire, WI 54702.

Professor 6/97-1/22; Chair 6/97-6/99; Interim Chair 11/09-1/10; Professor Emeritus 1/22-present.

**PROFESSIONAL SOCIETIES:**

American Chemical Society (Member 1979-present)

Sioux Valley Section: Councilor 1990-1996

Division of the History of Chemistry: Chair-Elect, 2002; Chair, 2003-2004, Immediate Past Chair, 2005-2006; Member, HIST Award Jury, 2019-2021.

Central Wisconsin Section: Alternate Councilor, 2003-2012; Chair-Elect 2000, 2008, 2014; Chair, 2001, 2009; 2015; Immediate Past Chair 2002, 2016.

Great Lakes Regional Meeting, Inc.: Steering Committee, 2000-2012; Juror, High School Chemistry Teaching Award 2002.

Royal Australian Chemical Institute (Member, 1980-present; elected Fellow, 1998)

Royal Society of Chemistry (Member 2008-present; elected Fellow, 2015).

**OTHER PROFESSIONAL ACTIVITIES:**

Member, Editorial Advisory Board, *Minireviews in Organic Chemistry* (2016-)

Reviewer of manuscripts for publication:

*Bulletin for the History of Chemistry*; *Angewandte Chemie International Edition*; *Bioorganic & Medicinal Chemistry*; *Bioorganic & Medicinal Chemistry Letters*; *Canadian Journal of Chemistry*; *ChemBioChem*; *Future Organic Chemistry*; *Future Medicinal Chemistry*; *Journal of Chemical Education*; *Journal of*

*Heterocyclic Chemistry; Journal of Physical Organic Chemistry; Minireviews in Organic Chemistry; SYNLETT; Synthesis; Tetrahedron; Tetrahedron:Asymmetry; Tetrahedron Letters.*

Reviewer of proposals for funding:

National Science Foundation; Petroleum Research Fund; Research Corporation

Reviewer, book proposal: Wiley: Tyrell, *Fundamentals of Industrial Chemistry*

Professional Consultant:

*Mosby's Medical, Nursing, and Allied Health Dictionary*; University of Northern Iowa, NSF-URC Planning Grant; I have served several small companies as a chemistry consultant and expert witness.

#### MISCELLANEOUS:

Listed, *American Men and Women of Science, Who's Who in Science & Technology, Who's Who Among America's Teachers, Who's Who in America, Who's Who in Science & Engineering, Who's Who in the World.*

Memberships, Scientific Advisory Board, MicroBioMed Corporation, Dallas, Texas (1989- 2011); Scientific Member, Corporate Advisory Board, Mionix Corporation, Rocklin, California (2002-).

Language Proficiency: French (read, write, speak); Latin (read, write); German (read and translate with a dictionary; speak at elementary level); Russian (read and translate with a dictionary; speak at elementary level).

### CONFERENCE PRESENTATIONS SINCE 1997: Presentations in the History of Chemistry

#### National Conferences

- Lewis, D. E. "The Zaitsev-Markovnikov feud: Speculations on the origins of Zaitsev's (Saytzeff's) Rule." *American Chemical Society National Meeting 1997*, 214, HIST-001.
- Kaganovich, N.; Lewis, D. E. "Zaitsev's early career; Or why did Butlerov take him back?" *American Chemical Society National Meeting 1999*, 217, HIST-017.
- Larina, A. I.; Lewis, D. E. "Egor Egorevich Vagner (1849-1903): 100 years after a "wondrously sharpwitted" chemist." *American Chemical Society National Meeting 2003*, 226, HIST 12.
- Lewis, D. E. "Kolbe and Kazan'." *American Chemical Society National Meeting 2003*, 225, HIST-011.
- Lewis, D. E. "There's more to it than Mendeleev: Russian contributions to the development of organic chemistry." *Abstracts of Papers, 18th Biennial Conference on Chemical Education* (Ames, Iowa) **2004**.
- Lewis, D. E. "Organic name reactions: Useful teaching tool or obstructive jargon?" *American Chemical Society National Meeting 2006*, 231, HIST-011.
- Lewis, D. E. "Beilstein, Menshutkin and Mendeleev: End of an era." *American Chemical Society National Meeting 2007*, 234, HIST-002.
- Lewis, D. E. "Aleksandr Mikhailovich Zaitsev (1841-1910): His lasting contributions a century after his death." *American Chemical Society National Meeting 2010*, 239, HIST-001.
- Lewis, D. E. "Brief history of organic chemistry in Russia: Early Russian organic chemists and their legacy." *American Chemical Society National Meeting 2012*, 243, HIST-18.
- Lewis, D. E. "Disability, despotism, and deoxygenation—outlaw to Academy Member: Nikolai Matveevich Kizhner (1867-1935)." *American Chemical Society National Meeting 2013*, 246, HIST-002.
- Lewis, D. E. "Karl Karlovich Klaus (1796-1864): Discoverer of Ruthenium." *American Chemical Society National Meeting 2015*, 250, HIST-14.
- Walsh, E. T., III.; Davis, A. R.; Lewis, D. E. "The Butlerov Museum of the Kazan School of Chemistry." *American Chemical Society National Meeting 2016*, 251, HIST-03.
- Davis, A. R.; Walsh, E. T., III.; Lewis, D. E. "Translation of Markovnikov's Magistr Khimii dissertation: A progress report." *American Chemical Society National Meeting 2016*, 251, HIST-SciMix.
- Lewis, D. E. "Serendipity in the history of chemistry." *American Chemical Society National Meeting 2018*, 255, CHED 70.
- Dieringer, R. K.; North, H. K.; Lewis, D. E. "Victor Grignard (1871-1935) and Henry Gilman (1893-1986): pioneers in organometallic chemistry." *American Chemical Society National Meeting 2018*, 255, HIST 43.
- Lewis, D. E. "The Wolff-Kishner reduction: biography, discovery and development." *American Chemical Society National Meeting 2018*, 255, HIST 44.
- Goedhart, C. S.; Rothbauer, D. R.; Raspel, S. N.; Lewis, D. E. "Development of Butlerov's structural theory, 1859-1862." *American Chemical Society National Meeting 2018*, 255, HIST 45.
- Lewis, D. E. "On the mutual influence of atoms in chemical compounds—Markovnikov's Rule" *American Chemical Society National Meeting 2018*, 255, HIST 49.

19. Lewis, D. E. "Markovnikov on isomerism in organic chemistry" *American Chemical Society National Meeting* **2018**, 255, HIST 48.
20. Lewis, D. E. "Vladimir Vasil'evich Markovnikov: his rule and legacy." *American Chemical Society National Meeting* **2019**, 257, HIST 6.
21. Lewis, D. E. "Yevgenii Konstantinovich Zavoiskii and the battle for EPR." *American Chemical Society National Meeting* **2019**, 257, HIST 26.
22. Lewis, D. E. "Russia's first professional chemical journal: *Zhurnal Russkogo Khimicheskogo Obshchestva*." *American Chemical Society National Meeting* **2019**, 258, HIST 40.
23. Lewis, D. E. "Ten years on: How a springer brief led to a decade of Russian conferences." *American Chemical Society National Meeting* **2021**, 261, HIST 3554334.
24. Lewis, D. E. "Nikolai Aleksandrovich Menshutkin (1834-1907): Physical organic chemistry four decades before Hughes and Ingold." *American Chemical Society National Meeting* **2021**, 261, HIST 3554368
25. Lewis, D. E. "2021: The sesquicentennial of the birth of the pioneer of pyridine chemistry, Aleksei Yevgen'evich Chichibabin (1871-1945)." *American Chemical Society National Meeting* **2021**, 262, HIST 3592759.
26. Lewis, D. E. "Gomberg and Chichibabin: Two Russian expatriates and the triarylmethyl saga." *American Chemical Society National Meeting* **2021**, 262, HIST 3592641.
27. Lewis, D. E. "Controversial Arthur Rudolf Hantzsch and his polemics." *American Chemical Society National Meeting* **2022**, 263, HIST 3660854.
28. Lewis, D. E. "Chemical history of color – but just two kinds of them." *American Chemical Society National Meeting* **2022**, 263, HIST 3637949.
29. Lewis, D. E., "Lev Aleksandrovich Chugaev (1874-1922): Bridging organic and inorganic chemistry." *American Chemical Society National Meeting* **2022**, 264, HIST 3750816.
30. Lewis, D. E., "Celebrating the sesquicentennial of the birth of Mikhail Semyonovich Tsvet (1872-1919), the father of chromatography." *American Chemical Society National Meeting* **2022**, 264, HIST 3750849.

#### National Organizations (U.S.A.):

31. Lewis, D. E. "Zinc alkyls in synthetic organic chemistry. Cutting edge chemistry at Kazan." *History of Science Society National Meeting* **1998**, panel presentation (invited panelist).
32. Lewis, D. E. "Russian name reactions of organic chemistry." Invited symposium presentation; *Southwest Regional Meeting, American Chemical Society*, Fort Worth, Texas, **2004**.
33. Lewis, D. E. "Emil Fischer and the carbohydrate problem." Invited symposium presentation, *Western Regional Meeting, American Chemical Society*, Sacramento, California, **2004**.
34. Lewis, D. E. "150 Years of organic structures." *American Chemical Society National Meeting* **2008**, 236, HIST-005. [This presentation appeared as a chapter in an ACS Symposium Series book]
35. Lewis, D. E. "Egor Egorovich Vagner (1849-1903): A 'wondrously sharpwitted' chemist." HIST 30." *American Chemical Society National Meeting* **2012**, 244, HIST 30. [This presentation appeared as a chapter in an ACS Symposium Series book]
36. Lewis, D. E. "Russian or German? First or fourth? The Citation for Chemical Breakthroughs award to St. Petersburg State University for Mendeleev's periodic system of the elements" *American Chemical Society National Meeting* **2014**, 248, HIST 11 (invited symposium presentation).
37. Lewis, D. E. "Yevgenii Konstantinovich Zavoiskii (1907-1976): Overlooked pioneer in magnetic resonance." *American Chemical Society National Meeting* **2016**, 251, HIST 21 (invited symposium presentation).
38. Lewis, D. E. "Everybody learns Russian organic chemistry." Plenary Speaker, *Cleveland Section ACS Meeting-In-Miniature (MIM)*, Case Western Reserve University, March 7, **2016**.
39. Lewis, D. E. "Thumbnails from the History of Organic Chemistry." Workshop for high school Chemistry Teachers, Chemical Heritage Foundation, Philadelphia, PA, August 20, 2016.
40. Lewis, D. E. "Russian breakthroughs: CCB Awards in St. Petersburg and Kazan." Panel presentation, *American Chemical Society National Meeting* **2016**, 252, PRES.
41. Lewis, D. E. "Pioneer of pyridine chemistry: Aleksei Yevgen'evich Chichibabin (1871-1945)." *American Chemical Society National Meeting* **2017**, 253, HIST-02.
42. Lewis, D. E. "Courageous Kizhner: Pain, politics and perseverance." *American Chemical Society National Meeting* **2017**, 254, PROF-21. [Invited Symposium presentation]
43. Lewis, D. E. "Was Markovnikov's Rule an inspired guess? ...No!" *American Chemical Society National Meeting* **2017**, 253, HIST-34.
44. Lewis, D. E. "1859-1860: Magic years in the development of the structural theory of organic chemistry." *American Chemical Society National Meeting* **2018**, 256, HIST 33.
45. Lewis, D. E. "Yevgenii Konstantinovich Zavoiskii and the fight for EPR." *American Chemical Society National Meeting* **2019**, 257, HIST xx.

**International Seminar and Plenary Presentations**

46. Lewis, D. E. "Citation for Chemical Breakthroughs." Presentation of *ACS Citations for Chemical Breakthroughs Award* to St. Petersburg State University, Russia, for Mendeleev's Periodic Table, October 31, **2013**.
47. Lewis, D. E. "Kazan: The cradle of Russian organic Chemistry." *International Arbuzovs Prize in Organophosphorus Chemistry Symposium*, Kazan Federal University, Tatarstan, Russia, November 7-8, **2013**. Keynote address, November 7. [This presentation was published (in English) the 2013 Yearbook of the A. E. Arbuzov Institute of Organic and Physical Chemistry of the Russian Academy of Sciences.]
48. Lewis, D. E. "Russian contributions to the development of organic chemistry." Address to students, Kazan Federal University, Kazan, Tatarstan, Russia, November 8, **2013**.
49. Lewis, D. E. "Pioneering Russian contributions to organic chemistry." *Ural Scientific Forum (Ural Federal University and the Ural Branch of the Russian Academy of Sciences)*, June 8-12, **2014**, Ekaterinburg, Russia, Opening Plenary lecture, June 8.
50. Lewis, D. E. "Klaus at Kazan: The discovery of ruthenium." *International Chugaev Conference*, Kazan Federal University, Kazan, Tatarstan, Russia, October 5-10, **2014**. Closing plenary lecture, October 10.
51. Lewis, D. E. "Citation for Chemical Breakthroughs—Production of anilines from readily available precursors." Presentation of *ACS Citations for Chemical Breakthroughs Award* to Kazan Federal University, Russia, October 10, **2014**.
52. Lewis, D. E. "From structural theory to stereochemistry: the critical role of the Kazan chemists." *International Symposium on Supramolecular Architectures*, Kazan Federal University, Kazan, Tatarstan, Russia, April 25-29, **2016**. Opening Plenary Lecture, April 25.
53. Lewis, D. E. "Was Markovnikov's Rule an inspired guess? Absolutely not!" 16th International Seminar on Inclusion Compounds and 3rd Youth School on Supramolecular and Coordination Chemistry, Kazan Federal University, Kazan, Tatarstan, Russia, June 26-30, **2017**. Invited Lecture, June 28.
54. Lewis, D. E. "Когда Бутлеров изменил из противника структурной теории к его сильному стороннику? [When did Butlerov change from an opponent of Structural Theory to its strongest proponent?]" V All-Russia Conference in Organic Chemistry with International Participation, Vladikavkaz, North Ossetia-Alania, Russia, September 10-14, **2018**. Keynote address, September 11.
55. Lewis, D. E. "Vladimir Vasi'evich Markovnikov: A builder of Russian organic chemistry." Markovnikov Readings, Krasnovidovo, Moskovskii oblast, Russia, January 18-21, **2019**. Markovnikov Medal address, January 20.
56. Lewis, D. E. "Vladimir Vasil'evich Markovnikov and the Origins of Markovnikov's Rule." Markovnikov Congress on Organic Chemistry, Lomonosov Moscow State University and Kazan Federal University (joint), Moscow & Kazan, Russia, June 21-28, 2019. Invited Lecture.
57. Lewis, D. E. "Mendeleev, Markovnikov and the *Zhurnal Russkago Khimicheskago Obshchestva*: Celebrating Three Sesquicentennials." Satellite Symposium, XXI Mendeleev Congress on General and Applied Chemistry, St. Petersburg, Russia, September 9-13, 2019. Keynote address.

**Presentations in Organic and Medicinal Chemistry****National Conferences**

58. Choi, S.; Lewis, D. E. "Reductive dimerization of (1R,3E,4S)-3-benzylidene-camphor." *American Chemical Society National Meeting* **1997**, 214, ORGN-243.
59. Mitchell, K.; Poteau, X.; Holden, A.; Brown, A.; Brown, R.; Holmes, C.; Matthew, D.; Yuan, D.; Chang, S.-C.; Utecht, R. E.; Lewis, D. E. "Fluorescent sensors involving PET or TICT state formation." *First Internet Conference on Photochemistry and Photobiology*, **1997**, Paper No. In-1.
60. Calimente, D.; von Hanwehr, R.; Lewis, D. E. "Chelators based on the cholic acid backbone." *American Chemical Society National Meeting* **1998**, 215, ORGN-019.
61. Lewis, D. E.; Gullickson, G. C. "Ritter reactions of alcohols and esters by solvolysis in formic acid." *American Chemical Society National Meeting* **2001**, 221, CHED-269.
62. Lewis, D. E. "A new century, a new direction: A.E. Arbuzov and chemistry at Kazan'." *American Chemical Society National Meeting* **2001**, 221, HIST-011.
63. Lischefski, J. D.; Lewis, D. E. "Multistep synthesis experiment for the organic laboratory." *American Chemical Society National Meeting* **2002**, 223, CHED-633.
64. Gullickson, G. C.; Lewis, D. E. "Benzhydrylation of active methylene compounds." *American Chemical Society National Meeting* **2002**, 223, ORGN-073.
65. Gullickson, G. C.; Lewis, D. E. "Chemoselective Ritter reactions of benzhydrol." *American Chemical Society National Meeting* **2002**, 224, ORGN-690.

66. Lewis, D. E.; Gullickson, G. C.; Baughman, R. G.; Khan, M. A. "Aldol addition reactions of propionanilide dianions." *American Chemical Society National Meeting 2003*, 225, ORGN 378.
67. Gullickson, G. C.; Lewis, D. E. "Convenient one-pot synthesis of dihydroquinolones." *American Chemical Society National Meeting 2003*, 226, ORGN-103.
68. Erdman, P. J.; Lewis, D. E. "Reactions of hydrazine with  $\alpha$ -cyanocinnamate esters: An unexpected fragmentation." *American Chemical Society National Meeting 2003*, 226, ORGN-105.
69. Gullickson, G. C.; Lewis, D. E. "Aldol reactions of anilide dianions." *American Chemical Society National Meeting 2003*, 225, ORGN-378.
70. Lischefski, J. D.; Lewis, D. E. "Water-based 'green' synthesis sequence experiment for the organic laboratory." *American Chemical Society National Meeting 2003*, 226, CHED-250.
71. Ott, E.; Campbell, D.; Scardino, L.; Nause, R.; McNitt, K.; Deprez, N.; Lewis, D.; Hartsel, S. "Got the confocal blues? Toward a robust series of organelle-specific fluorescence probes." *FASEB J.* **2004**, *18, Suppl. S*, C123.
72. Lewis, D. E.; McNitt, K. A.; Deprez, N. R.; Brown, R. G. "Synthesis and fluorescent properties of new Tröger's Bases." *American Chemical Society National Meeting 2004*, 228, ORGN-670.
73. Lewis, D. E.; Walters, J. A.; Gullickson, G. C. "3,4-Disubstituted-3,4-dihydro-2(1H)-quinolones." *American Chemical Society National Meeting 2004*, 228, ORGN-699.
74. Lewis, D. E.; Sormunen, G. J. "Homoallylic alcohols by the Barbier-Grignard reaction." *American Chemical Society National Meeting 2004*, 228, ORGN-605.
75. Ott, E.; Campbell, D.; Scardino, L.; McNitt, K.; Sormunen, G.; Hartsel, S.; Turtinen, L.; Lewis, D. "Tracking microdomains: A new fluorescent probe for raft-watching in live cells." *FASEB J.* **2005**, *19, Part 1, Suppl. S*, A291.
76. McNitt, K. A.; Scardino, L. L.; Sormunen, G. J.; Campbell, D. M.; Hartsel, S. C.; Lewis, D. E. "Tracking cell metabolism with fluorescent naphthamide probes." *American Chemical Society National Meeting 2005*, 230, BIOL-162.
77. McNitt, K. A.; Sormunen, G. J.; Scardino, L. L.; Ott, E. M.; Hartsel, S. C.; Lewis, D. E. "Site-selective fluorescent probes for cells and organelles." *American Chemical Society National Meeting 2005*, 230, MEDI-547.
78. Laskowski, R. L.; Wagner, A. J.; Lewis, D. E. "Fluorescent naphthalimide imaging agents for microscopy." *American Chemical Society National Meeting 2006*, 231, CHED-397.
79. Dreis, A. M.; Wagner, A. J.; Lewis, D. E. "Synthesis of carbohydrates carrying fluorescent naphthalimide groups" *American Chemical Society National Meeting 2007*, 233, CARB-063.
80. Groess, L. L.; Lewis, D. E. "Reactions of amine nucleophiles with naphthalimides and naphthalic anhydrides" *American Chemical Society National Meeting 2007*, 233, ORGN-193.
81. Groess, L. L.; Dreis, A. M.; Kopidlansky, K. M.; Lewis, D. E. "Design and synthesis of site-selective fluorescent naphthalimide probes for microscopy" *American Chemical Society National Meeting 2007*, 234, MEDI-170.
82. Dunkle, K. L.; Kopidlansky, K. M.; Groess, L. L.; Lewis, D. E. "Reactivity of the heterocyclic ring in naphthalimide derivatives." *American Chemical Society National Meeting 2008*, 235, ORGN-448.
83. Macek, G. E.; Lewis, D. E. "Is it time to change the oil yet? Monitoring engine wear." *American Chemical Society National Meeting 2008*, 235, CHED-275.
84. Raupach, E. A.; Kopidlansky, K. M.; Lewis, D. E. "Synthesis of fluorescent naphthalimides carrying a carbon substituent at the 3-position" *American Chemical Society National Meeting 2008*, 235, ORGN-155.
85. Lewis, D. E. "The protocenter concept: A tool for teaching stereochemistry." *American Chemical Society National Meeting 2010*, 239, CHED-1558.
86. Stromich, J. J.; Weber, A. K.; Mirzaei, Y. R.; Caldwell, M.D.; Lewis, D. E. "New synergistic adjuvants of warfarin anticoagulant activity." *American Chemical Society National Meeting 2010*, 239, MEDI-141.
87. Mirzaei, Y. R.; Lewis, D. E. "Limitations on acceleration of the Morita-Baylis-Hillman reaction by alcohols." *American Chemical Society National Meeting 2010*, 239, ORGN-721.
88. Klemm, B. P.; Tsogtbaatar, E.; Doyle, P. M.; Lewis, D. E. "Synthesis and reactions of vitamin K analogues." *American Chemical Society National Meeting 2010*, 240, ORGN-1099.
89. Lewis, D. E. "Oxidation of vitamin K: A free radical mechanism." *American Chemical Society National Meeting 2010*, 240, ORGN-685.
90. Klemm, B. P.; Lewis, D. E. "Structural and mechanistic models of VKORC1" *American Chemical Society National Meeting 2011*, 242, MEDI-143.
91. Doyle, P. M.; Tsogtbaatar, E.; Meulemans, D. R.; Lewis, D. E. "Synthesis and reactions of vitamin K analogues." *American Chemical Society National Meeting 2011*, 242, ORGN-692.
92. McKenney, R. M.; Laskowski, R. L.; Dunkle, K. L.; Lewis, D. E. "Unexpected reactions and reactivity of 4-amino-1,8-naphthalimide derivatives." *American Chemical Society National Meeting 2011*, 242, ORGN-169.

93. McKenney, R. K.; Groess, L. L.; Dunkle, K. L.; Lewis, D. E. "Kinetics of competing reactions of N-aryl-4-chloro-1,8-naphthalimides with primary amines." *American Chemical Society National Meeting* **2012**, 243, ORGN-256.
94. Anderson, K. M.; Tsogtbaatar, E.; Doyle, P. M.; Lewis, D. E. "Hydrolysis and redox reactions of methano-bridged analogues of dihydrovitamin K." *American Chemical Society National Meeting* **2012**, 244, ORGN-199.
95. Konorev, D. E.; Krentz, B. D.; Van Galen, A. B.; Lewis, D. E.; Gallagher, W.H. "Biosynthetic scheme for the production of methanobactins from a peptide precursor." *American Chemical Society National Meeting* **2013**, 245, BIOL-52.
96. Gillingham, J. M.; Lewis, D. E. "Does the strong base in the vitamin K carboxylation of Glu residues actually exist? A free radical mechanism for  $\gamma$ -carboxylation." *American Chemical Society National Meeting* **2013**, 246, BIOL-116.
97. Moos, S. A.; Nelson, B. M.; Tsogtbaatar, E.; Anderson, K. M.; Schmidt, M. J.; Chava, S.; Lewis, D. E. "Hydrolysis studies of the warfarin anticoagulation adjuvant, 9,10-diacetoxy-2,3-exo-epoxy-1,4-exo-methano-1,2,3,4-tetrahydroanthracene." *American Chemical Society National Meeting* **2013**, 246, ORGN-516.
98. La Plante, K. A.; Lewis, D. E. "Kinetics of the unusual reaction of N-aryl-4-chloro-1,8-naphthalimides with primary amines: General acid and general base catalysis." *American Chemical Society National Meeting* **2013**, 246, ORGN 551.
99. Wilson, M. B.; Lyons, Z. A.; Anderson, K. M.; Tsogtbaatar, E.; Doyle, P.; Klemm, B. P.; Lewis, D. E. "Redox chemistry of 9,10-diacetoxy -1,4-methano-1,4-dihydroanthracene derivatives." *American Chemical Society National Meeting* **2016**, 251, ORGN-442.
100. Hartfield, P. J.; Kennedy, M. K.; Lewis, D. E. "3-Benzylidenecamphor derivatives and their conversion into chiral auxiliaries and organocatalysts." *American Chemical Society National Meeting* **2016**, 251, ORGN-144.
101. Lyons, Z. A.; Schmidt, M. B.; Gillingham, J. M.; Lewis, D. E. "Free radical mechanism for the  $\gamma$ -glutamyl carboxylase reaction: A computational study." *American Chemical Society National Meeting* **2016**, 251, ORGN-443.
102. Anderson, S. M.; Mitchell, S. D.; Lewis, D. E. "A complete kinetic study of the aminolysis of N-aryl-4-chloro-1,8-naphthalimide." *American Chemical Society National Meeting* **2016**, 251, ORGN-195.
103. Giebink, A. K. Y.; Lewis, D. E. "Aromatic bromination in preference to addition to an alkene." *American Chemical Society National Meeting* **2017**, 253, ORGN-759.
104. Kennedy, M. K.; Hartfield, P. J.; Dahl, A.J.; Lewis, D. E. "Benzylisobornyl derivatives as chiral auxiliaries and chiral organocatalysts." *American Chemical Society National Meeting* **2017**, 253, ORGN-110.
105. Kysely, T. N.; Smith, B. A.; Lewis, D. E. "Steric and catalytic effects of alcohols on the transamination of naphthalimides." *American Chemical Society National Meeting* **2017**, 253, CHED-1531.
106. Dahl, A. J.; Hartwick, C. J.; Lewis, D. E. "Preparation of 3-endo-benzylisobornylamine and related compounds." *American Chemical Society National Meeting* **2018**, 255, ORGN-120.
107. Hartwick, C. J.; Martinez, L. E.; Giebink, A. K. Y.; Lewis, D. E. "Anchimeric assistance in reactions of N-allyl-4-alkylamino-1,8-naphthalimides." *American Chemical Society National Meeting* **2018**, 255, ORGN-638.
108. Huther, H. A.; Zinser, J. M.; Lewis, D. E. "Synthesis of fluorescent 4-amino-1,8-naphthalimide derivative." *American Chemical Society National Meeting* **2018**, 256, CHED 292.
109. Henrich, I.; Lewis, D. E. "Baeyer-Villiger oxidation: Discovery, discoverers and development." *American Chemical Society National Meeting* **2018**, 256, HIST 6.
110. Pollock, A. A.; Huther, H. A.; Lewis, D. E. "Synthesis of a fluorescent 4-amino-1,8-naphthalimide dye with bulky substituents." *American Chemical Society National Meeting* **2018**, 256, CHED 292.
111. Krause, C. L.; Lewis, D. E., "Electrophilic aromatic substitution by nucleophiles: Reactions of N-allyl-4-alkylamino-1,8-naphthalimides with halogen-like electrophiles." *American Chemical Society National Meeting* **2022**, 263, ORGN 3660577.

**Regional Conferences:**

112. Lewis, D. E. "Synthesis of biomedically useful compounds." *Posters in the Rotunda* **2008**, Madison, Wisconsin (invited panelist).
113. Lewis, D. E.; Caldwell, M. D. "Towards new oral anticoagulants." *Wisconsin Science and Technology Symposium* **2008**, University of Wisconsin-Stout, Menomonie, Wisconsin.
114. Lewis, D. E.; Caldwell, M.D. "New adjuvants of anticoagulant activity of warfarin." *Wisconsin Science and Technology Symposium* **2010**, University of Wisconsin-Green Bay, Green Bay, Wisconsin.
115. Lewis, D. E.; Caldwell, M. D. "VKOR: A target for anticoagulation." *Wisconsin Science and Technology Symposium* **2011**, University of Wisconsin-Whitewater, Whitewater, Wisconsin.

116. Lewis, D. E. "Anticoagulation: VKORC-1, vitamin K analogues, and novel warfarin adjuvants." *Gilson Symposium Series*, Wisconsin Institutes for Discovery, Madison, Wisconsin, **2011**.
117. Lewis, D. E. "Organic Chemistry in the Service of Biology and Medicine." *Wisconsin Science and Technology Symposium 2016*, University of Wisconsin-Oshkosh, Oshkosh, Wisconsin.

#### SEMINARS AT UNIVERSITIES AND PRESENTATIONS TO PROFESSIONAL GROUPS

[1984-1996: 19 invited talks before 1997]

- 1998: University of North Texas, Denton, Texas
- 2002: North Dakota State University, Fargo, North Dakota  
University of Wyoming, Laramie, Wyoming  
Central Wisconsin Section, American Chemical Society
- 2003: North Dakota State University, Fargo, North Dakota  
University of North Dakota, Grand Forks, North Dakota
- 2004: Hamline University, Minneapolis, Minnesota  
University of Wisconsin-Stevens Point, Stevens Point, Wisconsin  
University of Minnesota, Minneapolis, Minnesota  
University of Northern Iowa, Cedar Rapids, Iowa (NSF workshop presenter)
- 2005: University of Nebraska-Lincoln, Lincoln, Nebraska  
Gustavus Adolphus College, St. Peter, Minnesota  
University of Minnesota-Duluth, Duluth, Minnesota  
University of Missouri-St. Louis, St. Louis, Missouri
- 2007: University of Wisconsin-River Falls, River Falls, WI  
Marshfield Clinic, Marshfield, WI (WiSys workshop presenter)  
University of Wisconsin-La Crosse, La Crosse, WI (WiSys workshop presenter)
- 2009: University of Adelaide, Adelaide, Australia  
Royal Australian Chemical Institute, North Melbourne, Australia
- 2012: University of Adelaide, Adelaide, Australia (traditional post-commencement address by D.Sc. graduate)
- 2018: Hamline University, Minneapolis, Minnesota

#### PUBLICATIONS

##### Papers in the History of Chemistry

###### Refereed Papers

1. Lewis, D. E., "The University of Kazan: Provincial Cradle of Russian Organic Chemistry. Part I: Nikolai Zinin and the Butlerov School." *J. Chem. Educ.* **1994**, *71*, 39-42.
2. Lewis, D. E., "The University of Kazan: Provincial Cradle of Russian Organic Chemistry. Part II: Aleksandr Zaitsev and His Students." *J. Chem. Educ.* **1994**, *71*, 93-97.
3. Lewis, D. E., "Aleksandr Mikhailovich Zaitsev: Markovnikov's Conservative Contemporary." *Bull. Hist. Chem.* **1995**, *17/18*, 21-30.
4. Lewis, D. E., "The Beginnings of Synthetic Organic Chemistry: Zinc Alkyls and the Kazan' School." *Bull. Hist. Chem.* **2002**, *27*, 37-43.
5. Lewis, D. E., "Feuding Rule-Makers: Vladimir Vasil'evich Markovnikov (1838-1904) and Aleksandr Mikhailovich Zaitsev (1841-1910). A Commentary on the Origins of Zaitsev's Rule." *Bull. Hist. Chem.* **2010**, *35*, 115-124.
6. Lewis, D. E., "A. M. Zaitsev: Lasting contributions of a synthetic virtuoso a century after his death." *Angew. Chem. Int. Ed.*, **2011**, *50*, 6452-6458; this paper was also published as a German-language version: "A. M. Saytzeff: bleibendes Vermächtnis eines Virtuosen der Synthesechemie." *Angew. Chem.* **2011**, *123*, 6580-6586.
7. Lewis, D. E., "Disability; Despotism; Deoxygenation—from exile to Academy member. Nikolai Matveevich Kizhner (1867-1935)." *Angew. Chem. Int. Ed.*, **2013**, *52*, 11704-11712; this paper was also published as a German-language version "Behinderung ("Disability"); Despotismus; Deoxygenierung—von Exil bis Mitglied der Akademie. Nikolai Matwejewitsch Kizhner (1867-1935)." *Angew. Chem.* **2013**, *125*, 11920-11928.
8. Suntsov, V.; Lewis, D. E., "A century of base-promoted decomposition of hydrazones: the Tomsk years of Nikolai Matveevich Kizhner (1867-1935)." *Bull. Hist. Chem.* **2014**, *39*, 43-52.
9. Lewis, D. E., "Citations for Chemical Breakthroughs: Mendeleev's Periodic System of the Elements." *Bull. Hist. Chem.* **2014**, *39*, 1-6.

10. Lewis, D. E., "Introduction to an English translation, 'On the different explanations of certain cases of isomerism' by Aleksandr Butlerov." *Bull. Hist. Chem.* **2015**, *40*, 9-12.
11. Lewis, D. E., Primary Documents. 'On the different explanations of certain cases of isomerism' Mr. A. Boutlerow, *Bulletin de la Société Chimique de Paris, Nouvelle Série* **1864**, *1*, 100-128. [Translated by David E. Lewis] *Bull. Hist. Chem.* **2015**, *40*, 13-28.
12. Suntsov, V.; Lewis, D. E., "Introduction to an English translation of Kizhner's pioneering papers on deoxygenation." *Bull. Hist. Chem.* **2015**, *40*(2), 61-64.
13. Suntsov, V.; Lewis, D. E., " '25. The catalytic decomposition of alkylidenehydrazines as a method for the preparation of hydrocarbons (Abridged),' by N. Kizhner, *Zhurnal Russkago Fiziko-Khimicheskago Obshchestva* **1911**, *43*, 582-595." *Bull. Hist. Chem.* **2015**, *40*(2), 64-68.
14. Suntsov, V.; Lewis, D. E. " '27. 'On the catalytic decomposition of alkylidenehydrazines (Second part) (Abridged),' by N. Kizhner, *Zhurnal Russkago Fiziko-Khimicheskago Obshchestva* **1911**, *43*, 951-962." *Bull. Hist. Chem.* **2015**, *40*(2), 69-73.
15. Lewis, D. E., "Klaus at Kazan: The discovery of ruthenium." *Bull. Hist. Chem.* **2016**, *41*, 3-11.
16. Suntsov, V.; Lewis, D. E., "After the Revolution: Nikolai Matveevich Kizhner (1867-1935) in Soviet Moscow." *Bull. Hist. Chem.* **2017**, *42*, 46-56.
17. Lewis, D. E., "Alekssei Yevgen'evich Chichibabin (1871-1945): A century of pyridine chemistry." *Angew. Chem. Int. Ed.* **2017**, *56*, 9660-9668 (English version); *Angew. Chem.* **2017**, *129*, 9788-9796 (German version).
18. Lewis, D. E., "A. Ye. Arbutov: Father of organophosphorus chemistry in Russia." *Bull. Hist. Chem.*, **2017**, *42*, 112-125.
19. Lewis, D. E., "Introduction to an English translation of Markovnikov's first paper describing 'Markovnikov's Rule.'" *Bull. Hist. Chem.* **2018**, *43*, 21-23.
20. Lewis, D. E., "Primary Documents. 'On the question of the mutual influence of atoms in chemical compounds.' V. Markovnikov *Zhurnal Russkago Fiziko-Khimicheskago Obshchestva*, **1869**, *1*, 242-247." Translated by David E. Lewis. *Bull. Hist. Chem.* **2018**, *43*, 24-26.
21. Lewis, D. E., Предисловие. In Beloglazkina, Ye. K.; Beletskaya, I. P.; Nenajdenko, V. G., Eds. *История органической химии в университетах России. От истоков до наших дней*; Technosfera: Moscow, 2018; pp. 6-8.
22. Lewis, D. E., "Static to dynamic: Kazan chemists and the transformation from chemical structure to reaction regiochemistry." *Angew. Chem. Int. Ed.* **2019**, *58*, 3694-3705.
23. Lewis, D. E., "The minor impurity in spent ores of the "Siberian metal": ruthenium at 175." *Chem. Eur. J.* **2019**, *25*, 11394-11401.
24. Lewis, D. E., "1860-1861: Magic years in the development of the Structural Theory of organic chemistry." *Bull. Hist. Chem.* **2019**, *44*, 77-91.
25. Lewis, D. E., "The Logic Behind Markovnikov's Rule. Was It an Inspired Guess? ...No!" *Angew. Chem. Int. Ed.* **2021**, *60* (9), 4412-4421.
26. Brock, W. H.; Lewis, D. E., "A Different Kind of Nierenstein Reaction. The Chemical Society's Mistreatment of Maximilian Nierenstein," *Ann. Sci.* **2021**, *78*, 221-245.
27. Lewis, D. E., "Early Physical Organic Chemistry: Nikolai Aleksandrovich Menshutkin (1842-1907) and Reaction Velocities," *Chem. Eur. J.* **2021**, *27*, 15829-15841.
28. Lewis, D. E., "A Future History of Selectivity in Organic Chemistry: Whence, Where, and Whither?" *Bull. Hist. Chem.* **2022**, *47*, 62-76.
29. Lewis, D. E., "The Chemical History of Color," but just two kinds of them." *Bull. Hist. Chem.* **2022**, *48*, in press.

#### **Papers subject to Editorial Review only**

30. Lewis, D. E., "Gordin, M. D. A Well-Ordered Thing. Dmitrii Mendeleev and the Shadow of the Periodic Table (Basic Books: New York, 2004) " *Bull. Hist. Chem.* **2005**, *30*, 122-124. (Book review).
31. Baykoucheva, S. (with Lewis, D. E.), "The Russian Invasion...in Chemistry: Interview with David Lewis." *Chem. Inf. Bull.* **2008**, *60*, 16-19.
32. Lewis, D. E., "Kazan as a cradle of Russian organic chemistry." *Инст. Орг. и Физ. Хим. им А. Е. Арбузова, Ежегодник [Yearbook of the A.E. Arbutov Institute of Organic and Physical Chemistry]* **2013**, 70-78 [article is in English].
33. Lewis, D. E., Preface to Beloglazkina, Ye. K.; Beletskaya, I. P.; Nenajdenko, V. G., Eds. *История органической химии в университетах России. От истоков до наших дней*. Technosfera: Moscow, 2018; pp. 6-8 [in Russian].

#### **Refereed Book Chapters**



34. Lewis, D. E., "150 years of organic structures." In Giunta, C.J., Ed. *Atoms in Chemistry: From Dalton's Predecessors to Complex Atoms and Beyond*. ACS Symp. Ser. **2010**, 1044, 35-57.
35. Lewis, D. E., "Yegor Yegorovich Vagner (1849-1903): A 'wondrously sharpwitted' chemist." In Patterson, G.D.; Rasmussen, S.C., Eds. *Characters in Chemistry; A Celebration of the Humanity of Chemistry*. ACS Symp. Ser. **2013**, 1136, ch. 9, pp. 143-165.
36. Lewis, D. E., "Yevgenii Konstantonovich Zavoiskii (1907-1976): Overlooked pioneer in magnetic resonance." In Strom, E.T.; Mainz, V.V., Eds. *The posthumous Nobel Prize in Chemistry. Correcting the errors and oversights of the Nobel Prize Committee*. ACS Symp. Ser., **2017**, 1262, Ch. 10, pp. 219-241.
37. Lewis, D. E., "High creativity and historical invisibility: The rise of a chemical community in Russia." In Rasmussen, S.C., Ed. *Igniting the Ring of Fire: Historical Evolution of the Chemical Communities in the Countries of the Pacific Rim*. (World Scientific Publishing: Singapore, 2018); Ch. 11, pp. 309-354.
38. Lewis, D. E., "Yevgenii Konstantinovich Zavoiskii and the battle for EPR." In Strom, E. T.; Mainz, V. V., Eds. *Pioneers of Magnetic Resonance; ACS Symp. Ser.* **2020**, 1349, Ch. 6, pp. 113-122.

#### Online (Open Access) Publications: Name Reaction Bio columns in *Synform*

39. Deiringer, R. K.; Lewis, D. E., "Arthur Michael (1853-1942): The Michael Addition Reaction." *Synform*, **2017/09**, A142-144.
40. Lewis, D. E., "Independent Discoveries: The Wolff-Kishner Reduction." *Synform*, **2017/12**, A208-A212.
41. Lewis, D. E., "Charles Friedel (1832-1899) and James Mason Crafts (1839-1917): the Friedel-Crafts Alkylation and Acylation Reactions." *Synthesis* **2018/4**, A49-A53.
42. Lewis, D. E., "Rearrangement to electron-deficient nitrogen. 1. A. W. Hofmann (1818-1892), W. Lossen (1838-1906), and T. Curtius (1857-1928)." *Synform* **2018/7**, A107-A110.
43. Dieringer, R. K.; North, H. K.; Lewis, D. E., "Philippe Barbier (1848-1922) and Victor Grignard (1871-1935): Pioneers of organomagnesium chemistry." *Synform* **2018/10**, A155-A159.
44. Lewis, D. E., "Mendeleev, Menshutkin and Beilstein: A new generation takes over." *Synform* **2019/04**, A57-A61.
45. Lewis, D. E., "Carbocation rearrangements: the pinacol, Wagner-Meerwein, Demjanov, and Tiffeneau-Demjanov rearrangements." *Synform* **2019/08**, A121-A127.
46. Lewis, D. E., "Reaction regiochemistry: Markovnikov, Zaitsev and Hofmann." *Synform* **2019/11**, A172-A179.
47. Lewis, D. E., "The Nazarov Cyclization." *Synform* **2020/03**, A43-A49.
48. Lewis, D. E. "Johann Wilhelm Friedrich Adolf von Baeyer (1835-1917) and Victor Villiger (1868-1934): Peracid Oxidation of Ketones." *Synform* **2020/12**, A173-A178.
49. Lewis, D. E., "Aleksei Yevgen'evich Chichibabin (1871-1945) and Pyridine Chemistry," *Synform* **2021/05**, A173-A178.
50. Lewis, D. E., "Arthur Rudolph Hantzsch (1857-1935) and the Synthesis of Nitrogen Heterocycles." *Synform* **2021/12**, A201-A210.
51. Lewis, D. E., "Sergei Nikolaevich Reformatskii (1860-1934) and the Synthesis of  $\beta$ -Hydroxyesters." *Synform* submitted; publication on hold due to Thieme policy on publishing works by or about Russian scientists.

#### Books in the History of Chemistry

52. Lewis, D. E., *Early Russian Organic Chemists and Their Legacy*. Rasmussen, S., Ed. *SpringerBriefs in the History of Chemistry* (Springer: Heidelberg, **2012**); 136 pp.; [ISBN 978-3-642-28218-8]. (QD248.5.R8 L49 2012)
53. Lewis, D. E., *Казанская химическая школа глазами американского историка химии: Сборник трудов Дэвида Э. Льюиса [The Kazan Chemistry School Through the Eyes of an American Historian of Chemistry: Collected Papers by David E. Lewis]*. Shtyrlin, V.G., Ed.; Kononov, A.I., Scientific Ed.; Kazan University Publishing House: Kazan, Tatarstan, Russia; **2016**; 288 pp, [ISBN 978-5-00019-605-2]. Translation from English by Evtugyn, G. A.; Kuramshin, A. I.; Mukhametzhanov, T. A.; Nemtarev, A. V.; Serov, N. Yu.; Shtyrlin, V. G.
54. Lewis, D. E., *The Wolff-Kishner Reduction and Related Reactions*. Volume 1 in Lewis, D. E., Series Ed., *Organic Name Reactions. Biographies, Discovery and Development*. Elsevier: Amsterdam, 2019. [ISBN-13 9780128157275].
55. Lewis, D. E., *Addition, Elimination and Substitution: Markovnikov, Hofmann, Zaitsev and Walden. Discovery and Development*. Elsevier: Amsterdam, 2022. [ISBN: 9780128210277]
56. Lewis, D. E., Ed. *A History of Organic Chemistry in the Universities of Russia. From its Beginnings to the Present Day*; English translation and extension of Beloglazkina, Ye. K.; Beletskaya, I. P.; Nenajdenko, V. G., Eds. *История органической химии в университетах России. От истоков до наших дней*. Translation from the original Russian; in press.

## Papers in Organic Chemistry and Chemical Education

## Refereed Papers

57. Sellers, H. L.; Sims, L. B.; Schafer, L.; Lewis, D. E., "Vibrational Analyses Employing Cartesian Coordinates." *J. Mol. Struct.* **1977**, *41*, 149-151.
58. Sellers, H. L.; Sims, L. B.; Schafer, L.; Lewis, D. E., "NCRWDC: A Program to Determine Vibration Frequencies and Normal Modes of Vibration." *Quantum Chemistry Program Exchange* **1977**, No. 339.
59. Sims, L. B.; Burton, G. W.; Lewis, D. E. "BEBOVIB-IV: A Program for Calculating Isotope Effects in Chemical Reactions." *Quantum Chemistry Program Exchange* **1977**, No. 337.
60. Shienthong, D.; Ungphakorn, A.; Lewis, D. E.; Massy-Westropp, R. A., "Constituents of Thai Medicinal Plants - IV. New Nitrogenous Compounds - Odorine and Odorinol." *Tetrahedron Lett.* **1979**, 2247-2250.
61. Lewis, D. E.; Massy-Westropp, R. A.; Snow, M. R., "*cis,trans*-Tetrahydromitchelladione." *Acta Crystallogr.* **1979**, *B35*, 2253-2255.
62. Lewis, D. E.; Sims, L. B.; Yamataka, H.; McKenna, J., "Calculations of Kinetic Isotope Effects in the Hofmann Eliminations of Substituted (2-Phenylethyl)trimethylammonium Ions." *J. Am. Chem. Soc.* **1980**, *102*, 7411-7419.
63. Ando, T.; Kim, S.-G.; Matsuda, K.; Yamataka, H.; Yukawa, Y.; Fry, A.; Lewis, D. E.; Sims, L. B.; Wilson, J. C., "Kinetic Isotope Effect Study of the Solvolysis of Neophyl Arenesulfonates." *J. Am. Chem. Soc.* **1981**, *103*, 3505-3516.
64. Lewis, D. E.; Massy-Westropp, R. A.; Ingham, C. F.; Wells, R. J., "The Structure Determination of Two Related Eremophilone Dimers." *Aust. J. Chem.* **1982**, *35*, 809-826.
65. Sims, L. B.; Fry, A.; Lewis, D. E.; Netherton, L. T., "Interplay of Experiment and Theory in Isotope Effect Research." In Duncan, W.P.; Susan, A.B., (Eds.); *Synthesis and Applications of Isotopically Labeled Compounds*; (Elsevier: Amsterdam, **1983**); pp 261-266.
66. Hayes, R. N.; Sheldon, J. C.; Bowie, J. H.; Lewis, D. E., "Elimination of Dihydrogen from Collision-activated Alkoxide Negative Ions in the Gas Phase. An *Ab initio* and Isotope Effect Study." *J. Chem. Soc., Chem. Commun.* **1984**, 1431-1432.
67. Hayes, R. N.; Sheldon, J. C.; Bowie, J. H.; Lewis, D. E., "Elimination of Molecular Hydrogen and Methane from Collision-activated Alkoxide Negative Ions in the Gas Phase. An *ab initio* and Isotope Effect Study." *Aust. J. Chem.* **1985**, *38*, 1197-1208.
68. Lewis, D. E.; Rigby, H. L., "Intramolecular Trapping by Epoxides of Intermediates Generated During Organocuprate Additions to Propiolate Esters." *Tetrahedron Lett.* **1985**, *26*, 3437-3440.
69. Sheldon, J. C.; Bowie, J. H.; Lewis, D. E., "The Elimination of Dihydrogen from Collision Activated Methoxide Negative Ions in the Gas Phase. An *ab initio* and Isotope Effect Study." *New J. Chem.* **1988**, *12*, 269-275.
70. Downard, K. M.; Sheldon, J. C.; Bowie, J. H.; Lewis, D. E.; Hayes, R. N., "Are the Elusive Ions  $^{-}\text{CH}_2\text{SH}$ ,  $^{-}\text{CH}_2\text{-OH}$ , and  $^{-}\text{CH}_2\text{NH}_2$  Detectable in the Gas Phase? A Joint *ab Initio* / Experimental Approach." *J. Am. Chem. Soc.* **1989**, *111*, 8112-8115.
71. Khan, M. A.; Lewis, D. E.; Shah, G. N.; Mabry, T., "Chelidimerine from *Corydalis flabellata*: Interpretation of NMR Spectra." *Rev. Latinoamer. Quim.* **1990**, *21*, 140-142.
72. Seo, B.-I.; Suh, I.-H.; Jensen, W. P.; Lewis, D. E.; Wall, L. K.; Jacobson, W. P., "The Conformation of 3-*endo*-Arylmethylisobornyl Esters." *Tetrahedron: Asymmetry*, **1992** *3*, 367-370.
73. Nelson, G. J.; Matthees, D. P.; Lewis, D. E., "1-Phenylheptane-1,5-dione from *Phellinus tremulae*." *J. Nat. Prod.* **1993**, *56*, 1182-1183.
74. Chang, S.-C.; Archer, B. J.; Utecht, R. E.; Lewis, D. E.; Judy, M. M.; Matthews, J. L., "4-Alkylamino-3-bromo-N-alkyl-1,8-naphthalimides: New Photochemically Activatable Antiviral Compounds." *Bioorg. Med. Chem. Lett.* **1993**, *3*, 555-556.
75. Seo, B.-I.; Lewis, D. E.; Wall, L. K.; Lee, H.; Buttrum, J. W., "An Improved Practical Synthesis of Isomerically Pure 3-*endo*-(*p*-Methoxybenzyl)isoborneol." *Synth. Commun.* **1993**, *23*, 15-22.
76. Suh, I.-H.; Seo, B.-I.; Lewis, D. E.; Jensen, W. P.; Jacobson, R. A., "Structure of the *p*-Nitrobenzoate Ester of 3-*endo*-(*p*-Methoxybenzyl)isoborneol." *Acta Crystallogr. C* **1993**, *C43*, 562-565.
77. Rigby, H. L.; Lewis, D. E., "The Direct Diels-Alder Synthesis of Derivatives of 7-Oxo-5-norbornene-2-carboxylic Acid." *Synth. Commun.* **1993**, *23*, 993-1001.
78. Chanh, T. C.; Lewis, D. E.; Allan, J. S.; Sogandares-Bernal, F.; Judy, M. M.; Utecht, R. E.; Matthews, J. L., "Neutralization of Human Immunodeficiency Virus with a Novel Photoactivated 1,8-Naphthalimide." *AIDS Res. Human Retrovir.* **1993**, *9*, 891-896.
79. Chanh, T. C.; Lewis, D. E.; Judy, M. M.; Sogandares-Bernal, F.; Michalek, G. R.; Utecht, R. E.; Skiles, H.; Chang, S.-C.; Matthews, J. L., "Inhibition of Retrovirus-Induced Syncytium Formation by Photoproducts

- of a Brominated 1,8-Naphthalimide Compound." *Antivir. Res.* **1994**, *25*, 133-146.
80. Baughman, R. G.; Chang, S.-C.; Utecht, R. E.; Lewis, D. E., "Two Related, Potent Antiviral Compounds: 3-Bromo-*N*-butyl-4-butylamino-1,8-naphthalenedicarboximide (1) and 4-Amino-3-bromo-*N*-butyl-1,8-naphthalenedicarboximide (2)." *Acta Crystallogr. C.* **1995**, *C51*, 1189-1193.
81. Hayes, B. A.; Gupta, S.; Chang, S.-C.; Utecht, R. E.; Lewis, D. E., "Photochemically Activated Antiviral Halogenated 1,8-Naphthalimides: Synthesis of *N,N'*-bis-{2-[(5-Bromo-2-[1-<sup>14</sup>C]hexyl-1*H*-benz[*de*]-isoquinolin-1,3(2*H*)-dion-6-yl)amino]-ethyl}hexanediamide." *J. Label. Compounds Radiopharm.* **1996**, *33*, 607-612.
82. Suh, I.-H.; Choi, S.; Jensen, W. P.; Lewis, D. E., "Two Related Benzylcamphor Dimers." *Acta Crystallogr. C* **1997**, *C53*, 963-967.
83. Suh, I.-H.; Park, K. H.; Jensen, W. P.; Lewis, D. E., "Molecules, Crystals & Chirality." *J. Chem. Educ.* **1997**, *74*, 800-805.
84. Mitchell, K. A.; Brown, R. G.; Yuan, D.; Chang, S.-C.; Utecht, R. E.; Lewis, D. E., "A Fluorescent Sensor for Cu<sup>2+</sup> at the Sub-ppm Level." *J. Photochem. Photobiol. A: Chem.* **1998**, *115*, 157-161.
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87. Lewis, D. E., "Organizing Organic Reactions: The Importance of Antibonding Orbitals." *J. Chem. Educ.* **1999**, *76*, 1718-1722.
88. Choi, S.; Lewis, D. E., "Formation of a Dimeric Camphor Derivative with an Unusually Stable 3-*exo* Substituent." *Tetrahedron* **2000**, *44*, 8637-8641.
89. Seo, B. I.; Lewis, D. E., "Stereochemistry of the Monoalkylation of (1*R*)-3-*endo*-(*p*-Methoxybenzyl)isobornyl Propionate." *Synthesis*, **2002**, 1391-1397.
90. Gullickson, G. C.; Lewis, D. E., "Synthesis of *N*-Benzhydrylamides from Nitriles by Ritter Reactions in Formic Acid." *Synthesis*, **2003**, 681-684.
91. Gullickson, G. C.; Lewis, D. E., "Reactions of Active Methylene Compounds with Benzhydrol During Solvolysis in Formic Acid." *Aust. J. Chem.* **2003**, *56*, 385-388.
92. Erdman, P. J.; Gosse, J. L.; Jacobson, J. A.; Lewis, D. E., "The Reaction of Hydrazine With  $\alpha$ -Cyanocinnamate Esters: A Caveat." *Synth. Commun.* **2004** *34*, 1163-1171.
93. Sormunen, G. J.; Lewis, D. E., "A Rapid and Convenient Synthesis of Homoallylic Alcohols by the Barbier-Grignard Reaction." *Synth. Commun.* **2004** *34*, 3473-3480.
94. Deprez, N. R.; McNitt, K. A.; Petersen, M. E.; Brown, R. G.; Lewis, D. E., "Synthesis and Fluorescence Properties of Naphthalimide-Containing Troeger's Bases." *Tetrahedron Lett.* **2005**, *46*, 2149-2153.
95. Gullickson, G. C.; Khan, M. A.; Baughman, R. G.; Walters, J. A.; Lewis, D. E., "Addition Dithio Derivatives of *N*-Monosubstituted Propanamides to Aldehydes: A Stereochemical Study." *Synthesis* **2005**, 2906-2912.
96. Maley, P. S.; Anderson, R. M.; Lewis, D. E., "Improved Synthesis of C<sub>2</sub>-Symmetric 4,4'- $\alpha,\omega$ -Alkylenedioxy-bis(3-methoxybenzaldehydes)." *Synth. Commun* **2005**, *35*, 1583-1588.
97. Behling, L. A.; Hartsel, S. C.; Lewis, D. E.; DiSpirito, A. A.; Choi, D. W.; Masterson, L. R.; Veglia, G.; Gallagher, W. H., "NMR, Mass Spectrometry, and Chemical Evidence Reveal a Different Chemical Structure for Methanobactin that Contains Oxazolone Rings." *J. Am. Chem. Soc.* **2008**, *130*, 12604-12605.
98. Lewis, D. E., "A discussion of 'Can reaction mechanisms be proven?'" *J. Chem. Educ.* **2009**, *86*, 554.
99. Lewis, D. E., "The protocenter concept: A method for teaching stereochemistry." *J. Chem. Educ.* **2010**, *87*, 604-608.
100. Stromich, J. J.; Weber, A. K.; Mirzaei, Y. R.; Caldwell, M. D.; Lewis, D. E., "New adjuvants to enhance anticoagulant activity of warfarin." *Bioorg. Med. Chem. Lett.* **2010**, *20*, 1928-1932.
101. McKenney, R. K.; Groess, L. L.; Kopidlansky, K. M.; Dunkle, K. L.; Lewis, D. E., "The heterocycle of 4-substituted-1,8-naphthalimides is NOT inert to nucleophilic attack." *Org. Biomol. Chem.* **2013**, *11*, 4390-4396.
102. Mitchell, S. D.; Anderson, S. M.; LaPlante, K. A.; McKenney, R. K.; Lewis, D. E., "Catalysis in transamination of 6-chloro-2-(3-chlorophenyl)-1*H*-benz[*de*]isoquinoline-1,3-(2*H*)-dione and its implications in laser tissue welding." *J. Heterocycl. Chem.*, **2017**, *54*, 2029-2037.
103. Lewis, D. E., "Intramolecular pericyclic reactions of acetylene derivatives leading to dehydroaromatic and related species." *Minirev. Org. Chem.* **2017**, *14*, 107-121.

#### Invited Publications and Conference Proceedings Papers in Organic and Medicinal Chemistry (Editorial review only).

104. Sims, L. B.; Lewis, D. E., "Bond Order Methods for Calculating Isotope Effects in Organic Reactions." In Buncel, E.; Lee, C.C., (Eds.); *Isotopes in Organic Chemistry*; (Elsevier: Amsterdam, **1984**); Vol. 6; pp. 161-

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