CURRICULUM VITAE
Alexander M. Mebel

Education: *Undergraduate* (B.Sc., Physical Chemistry)
University: Moscow Institute of Steel and Alloys (1984)
Graduate (Ph.D., Physical Chemistry)
Kurnakov's Institute of General and Inorganic Chemistry
Russian Academy of Science, Moscow, Russia (1990)

Professional Experience:

8/24-current	Chair Department of Chemistry and Biochemistry Florida International University, Miami, Florida
8/14-current	Professor Department of Chemistry and Biochemistry Florida International University, Miami, Florida
8/10-8/14	Professor and Graduate Program Director Department of Chemistry and Biochemistry Florida International University, Miami, Florida
8/07-8/10	Associate Professor Department of Chemistry and Biochemistry Florida International University, Miami, Florida
8/03-8/07	Assistant Professor Department of Chemistry and Biochemistry Florida International University, Miami, Florida
10/01-8/03	Associate Research Fellow Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, Taiwan
7/98-9/01	Assistant Research Fellow Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, Taiwan
2/98-6/2000	Visiting Assistant Professor Tamkang University, Tamsui, Taiwan
1/96-6/98	Senior Academia Sinica Postdoctoral Fellow Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, Taiwan
10/93-12/95	Senior Research Associate Chemistry Department, Emory University, Atlanta, Georgia, USA
8/92-9/93	Visiting scientist, special researcher Institute for Molecular Science, Okazaki, Japan.
9/91-3/92	Visiting researcher Institut für Organische Chemie Universität Erlangen-Nürnberg, Erlangen, Germany
6/87-2/93	Research worker
7/84-5/87	Engineer Laboratory of Quantum Chemistry Institute of New Chemical Problems Russian Academy of Science in Chernogolovka, Moscow, Russia
9/89-5/91	Lecturer All-Union Polytechnic Institute Moscow, Russia

Awards

Academia Sinica Research Award for Junior Researches	2002
IAMS Outstanding Publication Award	2003
Florida International University CASE Research Award	2016
Florida International University CASE Service Award	2018
FIU Faculty Convocation Award for Excellence in Research	2019
Fellow of The Combustion Institute	2021
Florida International University CASE Research Award	2021
39th International Combustion Symposium Distinguished Paper Award	2023
40th International Combustion Symposium Distinguished Paper Award	2025

Research, Professional, and Mentorship Experience

Dr. Mebel's research area is applications-oriented theoretical chemistry, i.e, computer simulations of the behavior of molecules based on 'the first principles' – the laws of quantum mechanics. He uses theoretical calculations to investigate chemical and photochemical reactions relevant to combustion of fossil fuels, atmospheric chemistry, astrochemistry, material science, organometallic complexes in aqueous and organic solutions, and other chemical fields. The theoretical studies involve state-of-the-art quantum chemical methods using modern computer clusters and represent a valuable tool for characterization and prediction of various physico-chemical and spectroscopic properties of molecules and their reactivity and for interpretation of experimental data. These studies provide highly accurate and reliable data on the geometric and electronic structure, relative energies of reaction intermediates and products, and barrier heights involved in various reaction mechanisms. He graduated six Ph.D. students and provided mentorship to numerous undergraduate students.

Publications

(646 publications and 15,836 citations on Web of Science as of July 2024, 12,960 excluding self-citations, SCI h-index 60)

Regular Articles

1. Mebel A.M., Zyubina T.S.
   Nonempirical calculations of the potential surface and molecular structure of aluminum oxide (Al_2O) in singlet and triplet states.
   Zh. Neorg. Khim. 1987, 32, 1285-1289.

2. Mebel A.M., Klimenko N.M., Charkin O.P.
   Structure and stability of the lithiated ALi_k and ALi_{k+1}^+ clusters of the 2nd and 3rd period elements by non-empirical calculations with electronic correlation taken into account.
   Zh. Struckt. Khim. 1988, 29, 12-21.

3. Klimenko N.M., Mebel A.M., Charkin O.P.
   Peculiarity of electronic structure of the hypovalent ALi_k and ALi_{k+1}^+ lithides.
   Zh. Struckt. Khim. 1988, 29, 22-27.

4. Korkin A.A., Mebel A.M., Borisov E.V.
   Nonempirical study of the isomers of the PNO oxyphosphonitride.
   Izvestia of USSR Acad. Sci., 1988, 900-903.

5. Korkin A.A., Mebel A.M., Tsvetkov E.N.
Theoretical study of the effect of protonation on the phosphorus-nitrogen bond of amino phosphines.
Zh. Obshch. Khim., 1988, 58, 1015-1021.

6. Mebel A.M., Charkin O.P., Kuznetsov I.Yu., Solntsev K.A., Kuznetsov N.T.
Theoretical study of structure and migration non-rigidity of the $B_6H_7^-$ and LiB_6H_7 closoboranes.
Zh. Neorg. Khim., 1988, 33, 1685-1689.

7. Mebel A.M., Charkin O.P., Solntsev K.A., Kuznetsov N.T.
Theoretical study of structure and migration non-rigidity of the $B_{10}H_{11}^-$ closoborane anion.
Zh. Neorg. Khim., 1988, 33, 2263-2269.

8. Mebel A.M., Charkin O.P.
Theoretical study of the reaction of the H_2 molecule cleavage from the $B_6H_7^-$ anion.
Zh. Neorg. Khim., 1989, 34, 275-280.

9. Mebel A.M., Charkin O.P., Solntsev K.A., Kuznetsov N.T.
Theoretical study of structure and migration non-rigidity of the $B_7H_8^-$ and $B_8H_9^-$ anions.
Zh. Neorg. Khim., 1989, 34, 281-289.

10. Mebel A.M., Charkin O.P.
Theoretical study of structure and stability of fluoro-substituted derivatives of the closoborane $B_6F_iH_{6-i}^{2-}$ anion.
Zh. Neorg. Khim., 1989, 34, 611-617.

11. Mebel A.M., Charkin O.P.
Theoretical study of migration non-rigidity of the closoborane salts $Li_2B_6H_6$, BeB_6H_6, $(BeH)_2B_6H_6$, and $LiB_6H_6^-$.
Zh. Struckt. Khim., 1989, 30, 7-18.

12. Mebel A.M., Charkin O.P., Solntsev K.A., Kuznetsov N.T.
Theoretical study of structure and migration non-rigidity of the $B_9H_{10}^-$ anion.
Zh. Neorg. Khim., 1989, 34, 1435-1443.

13. Mebel A.M., Charkin O.P., Solntsev K.A., Kuznetsov N.T.
Theoretical study of structure and migration non-rigidity of the $B_{12}H_{13}^-$ anion.
Zh. Neorg. Khim., 1989, 34, 1444-1448.

14. Musaev D.G., Mebel A.M., Chimiraglia R., Tomasi J., Charkin O.P.

Nonempirical study of isomerization in the CuAlO and CuCP molecules by pseudopotential method.

Koord. Khim., 1989, 15, 1155-1161.

15. Yakobson V.V., Musaev D.G., Zyubin A.S., Mebel A.M., Charkin O.P.
Theoretical study of Li^+ affinity of the hydrides MH_n, fluorides MF_n, and lithides MLi_n molecules.
Koord. Khim., 1989, 15, 1478-1488.

16. Mebel A.M., Charkin O.P.
Theoretical study of structure of the $AlB_5H_6^{2-}$, CB_5H_6, $SiB_5H_6^-$ anions and their protonated derivatives $AlB_5H_7^-$, CB_5H_7, and SiB_5H_7.
Zh. Neorg. Khim., 1990, 35, 312-319.

17. Korkin A.A., Mebel A.M.
Comparative nonempirical study of the conjugation effects in iminophosphines and iminophosphoranes.
Metalorg. Khim., 1990, 3, 1005-1011.

18. Mebel A.M., Charkin O.P., Klimenko N.M.
Theoretical study of the hexalithide clusters ALi_6.
Zh. Neorg. Khim., 1991, 36, 439-450.

19. Mebel A.M., Charkin O.P., Klimenko N.M.
Theoretical study of structure and stability of beryllium hydride clusters $(BeH)_k$ (k = 2, 4, 6), $A(BeH)_4$, and $A(BeH)_6$.
Zh. Neorg. Khim., 1991, 36, 741-751.

20. Mebel A.M., Charkin O.P.
Theoretical study of reactions of molecular hydrogen with active centers in the $B_6H_5^-$ and $AlB_5H_5^-$ clusters.
Zh. Neorg. Khim., 1991, 36, 2354-2367.

21. Mebel A.M., Charkin O.P.
Nonempirical study of potential surface of the least motion path of $AlH + H_2 \rightarrow AlH_3$ reaction.
Zh. Neorg. Khim., 1991, 36, 2368-2375.

22. Mebel A.M., Charkin O.P.
Theoretical study of reactions of molecular hydrogen with active centers in the CB_5H_5 and SiB_5H_5 clusters.
Zh. Neorg. Khim., 1991, 36, 2881-2888.

23. Solntsev K.A., Mebel A.M., Votinova N.A., Kuznetsov N.T., Charkin O.P.
Polyhedral anion $B_{12}H_{12}^{2-}$ as three-dimensional aromatic system.
Koord. Khim., 1992, 18, 340-364.

24. Buehl M., Mebel A.M., Charkin O.P., Schleyer P.v.R.

The structure of $B_8H_8^{2-}$ in solution. Is $B_8H_9^-$ also involved? An ab initio/ IGLO/NMR study.
Inorg. Chem., 1992, 31, 3769-3775.

25. Mebel A.M., Charkin O.P.
Theoretical of reactions of molecular hydrogen with active centers in the $B_nH_{n-1}^-$ clusters.
Zh. Neorg. Khim., 1992, 37, 2355-2362.

26. Mebel A.M., Strunina E.V., Charkin O.P.
Theoretical study of reactions of cluster active center insertion into the C-H and C-C bonds.
Zh. Neorg. Khim., 1992, 37, 2363-2374.

27. Borisov E.V., Mebel A.M., Knyazev B.A., Zabrodin V.B., Korkin A.A.
Comparative nonempirical study and isodesmic calculations of heats of formation of HNCO and HPCI isomers.
Izvestia of Russ. Acad. Sci., Ser. Khim. 1992, 41, 1585-1590.

28. Mebel A.M., Charkin O.P., Buehl M., Schleyer P. v. R.
The structure and non-rigidity of $B_{10}H_{11}^-$. Ab initio/IGLO/NMR study.
Inorg. Chem., 1993, 32, 463-468.

29. Mebel A.M., Charkin O.P., Schleyer P. v. R.
Theoretical prediction of the structure and non-rigidity of $B_7H_8^-$. Application of the ab initio/IGLO/NMR method.
Inorg. Chem., 1993, 32, 469-473.

30. Mebel A.M., Musaev D.G., Morokuma K.
Ab initio MO study of mechanisms of the reaction of B_2H_6 with SH_2.
J. Phys. Chem. 1993, 97, 7543-7552.

31. Mebel A.M., Musaev D.G., Morokuma K.
Ab initio molecular orbital study of structure and NMR ^{11}B chemical shifts of Lewis base adducts of CO, NH_3, PF_3, and PH_3 with small nido-boranes, B_3H_7 and B_4H_8.
Chem. Phys. Lett. 1993, 214, 69-76.

32. Mebel A.M., Musaev D.G., Koga N., Morokuma K.
Metallaboranes with 8 and 9 group transition metals. Is accurate ab initio molecular orbital calculation of structure, stability and NMR ^{11}B chemical shifts possible?
Bull. Chem. Soc. Jpn. 1993, 66, 3259-3270.

33. Mebel A.M., Musaev D.G., Morokuma K.

An alternative mechanism of BH_2SH formation in the reaction of B_2H_6 with SH_2: Concerted elimination of BH_3 and H_2 from $H_2S{\cdot}B_2H_6$. Ab initio MO study.
Chem. Phys. Lett. 1993, 216, 313-318.

34. Mebel A.M., Morokuma K., Musaev D.G.
Ab initio MO study of cluster rearrangements in pentagonal pyramidal clusters, B_6H_{10} borane and $[(IrB_5H_8)(CO)(PH_3)_2]$ metallaborane.
J. Am. Chem. Soc., 1994, 116, 3932-3942.

35. Mebel A.M., Morokuma K., Lin M.C.
Ab Initio Molecular Orbital Study of Potential Energy Surface for the $NH+NO_2$ Reaction.
J. Chem. Phys., 1994, 101, 3916-3922.

36. Herges R., Mebel A.M.
Propargylene.
J. Am. Chem. Soc., 1994, 116, 8229-8237.

37. Mebel A.M., Lin M.C.
Ab initio molecular orbital calculations of $C_6H_5O_2$ isomers.
J. Am. Chem. Soc., 1994, 116, 9577-9584.

38. Musaev D.G., Mebel A.M., Morokuma K.
An ab initio molecular orbital study of the mechanism of the rhodium(I)-catalyzed olefin hydroboration reaction.
J. Am. Chem. Soc., 1994, 116, 10693-10702.

39. Yu T., Mebel A.M., Lin M.C.
The reaction of phenoxy radical with nitric oxide.
J. Phys. Org. Chem., 1995, 8, 47-53.

40. Musaev D.G., Matsubara T., Mebel A.M., Koga N., Morokuma K.
Ab initio molecular orbital studies of elementary reactions and homogeneous catalytic cycles with organometallic compounds.
Pure Appl. Chem., 1995, 67, 257-263.

41. Mebel A.M., Morokuma K., Lin M.C., Melius C.F.
Potential energy surface of the HNO+NO reaction. An ab initio molecular orbital study.
J. Phys. Chem., 1995, 99, 1900-1908.

42. Mebel A.M., Isobe K., Morokuma K.
A theoretical study of rectangular tetrasulfur in a gas phase and in the tetranuclear $[\{Rh_2(\eta^5\text{-}C_5H_5)_2(\mu\text{-}CH_2)_2\}_2(\mu\text{-}S_4)]^{2+}$ complex.
Inorg. Chem., 1995, 34, 1208-1211.

43. Lin M.C., Mebel A.M.
An ab initio molecular orbital study of the O + C_6H_5O reaction.
J. Phys. Org. Chem., 1995, 8, 407-420.

44. Mebel A.M., Lin M.C., Morokuma K., Melius C.F.
Theoretical study of the gas phase structure, thermochemistry and decomposition mechanisms of NH_4NO_2 and $NH_4N(NO_2)_2$.
J. Phys. Chem., 1995, 99, 6842-6848.

45. Mebel A.M., Morokuma K., Lin M.C.
Ab initio molecular orbital study of potential energy surface for the reaction of C_2H_3 with H_2 and related reactions.
J. Chem. Phys., 1995, 103, 3440-3449.

46. Mebel A.M., Hsu, C.-C., Lin M.C., Morokuma K.
An ab initio molecular orbital study of potential energy surface of the NH_2 + NO_2 reaction.
J. Chem. Phys., 1995, 103, 5640-5649.

47. Mebel A.M., Morokuma K., Lin M.C.
Modification of the GAUSSIAN-2 theoretical model: The use of coupled-cluster energies, density-functional geometries, and frequencies.
J. Chem. Phys., 1995, 103, 7414-7421.

48. Mebel A.M., Morokuma K.
Theoretical Study of the Reaction of HCl with $ClONO_2$ catalyzed by NO_3^-. "Attachment-Detachment" Mechanism for the Anion-Catalyzed Neutral Reactions.
J. Phys. Chem., 1996, 100, 2985-2992.

49. Mebel A.M., Lin M.C., Morokuma K., Melius C.F.
Theoretical rate constants for the $NH_3 + NO_X \rightarrow NH_2 + HNO_X$ (x = 1,2) reactions by ab initio MO/VTST calculations.
J. Phys. Chem., 1996, 100, 7517-7525.

50. Liu R., Morokuma K., Mebel A.M., Lin M.C.
Ab initio study of the mechanism for the thermal decomposition of the phenoxy radical.
J. Phys. Chem., 1996, 100, 9314-9322.

51. Mebel A.M., Chen Y.-T., Lin S.H.
π-π^* vibronic spectrum of ethylene from ab initio calculations of the Franck-Condon factors.
Chem. Phys. Lett., 1996, 258, 53-62.

52. Hsu C.-C., Mebel A.M., Lin M.C.
Ab initio molecular orbital study of the HCO + O_2 reaction: direct vs. indirect abstraction channels.
J. Chem. Phys., 1996, 105, 2346-2352.

53. Luna A., Mebel A.M., Morokuma K.
A molecular orbital study of the global potential energy surfaces

of the [H,C,N,O]+ system in doublet and quartet states.
J. Chem. Phys., 1996, 105, 3187-3205.

54. Mebel A.M., Lin M.C., Morokuma K., Melius C.F.
Theoretical study of reactions of N_2O with NO and OH radicals.
Int. J. Chem. Kinet., 1996, 28, 693-703.

55. Mebel A.M., Luna A., Lin M.C., Morokuma K.
Theoretical study of the global potential energy surfaces of the [H,C,N,O] system
in singlet and triplet states.
J. Chem. Phys., 1996, 105, 6439-6454.

56. Mebel A. M., Diau E. W. G., Lin M. C., Morokuma K.
Ab Initio and RRKM Calculations for Multichannel Rate Constants of the $C_2H_3 + O_2$ Reaction.
J. Am. Chem. Soc., 1996, 118, 9759-9771.

57. Mebel A.M., Chen Y.-T., Lin S.H.
On the theoretical investigation of vibronic spectrum of ethylene by ab initio calculations of the Franck-Condon factors.
J. Chem. Phys., 1996, 105, 9007-9020.

58. Madden L.K., Mebel A.M., Lin M.C., Melius C.F.
A theoretical study of the thermal isomerization of fulvene to benzene.
J. Phys. Org. Chem., 1996, 9, 801-810.

59. Moskaleva L.V., Mebel A.M., Lin M.C.
The $CH_3 + C_5H_5$ reaction: a potential source of benzene at high temperatures.
Twenty Sixth Symposium (International) on Combustion, The Combustion Institute: Pittsburgh, 1996, pp. 521-526.

60. Halbgewachs M.J., Diau E.W.G., Mebel A.M., Lin M.C., Melius C.F.
Thermal reduction of NO by NH_3: kinetic modeling of the NH_2 + NO product branching ratio.
Twenty Sixth Symposium (International) on Combustion, The Combustion Institute: Pittsburgh, 1996, pp. 2109-2116.

61. Hsu C.-C., Lin M.C., Mebel A.M., Melius C.F.
Ab initio study of the H + HONO reaction: direct abstraction versus indirect exchange processes.
J. Phys. Chem. A, 1997, 101, 60-66.

62. Mebel A.M., Lin S.H., Chang C.-H.
Theoretical study of vibronic spectra and photodissociation pathways of methane.
J. Chem. Phys., 1997, 106, 2612-2620.

63. Mebel A.M., Lin S.H.

Excited Electronic States of the Methyl Radical. Ab Initio Molecular Orbital Study of Geometries, Excitation Energies and Vibronic Spectra.
Chem. Phys., 1997, 215, 329-341.

64. Mebel A.M., Lin M.C., Yu T., Morokuma K.
Theoretical study of potential energy surface and thermal rate constants for $C_6H_5 + H_2$ and $C_6H_6 + H$ reactions.
J. Phys. Chem. A, 1997, 101, 3189-3196.

65. Hayashi M., Yang T.S., Mebel A.M., Chang C.H., Lin S.H., N.F. Scherer
Vibronic and vibrational coherence and relaxation dynamics of molecules in condensed phases.
Chem. Phys., 1997, 217, 259-273.

66. Richardson S.L., Francisco J.S., Mebel A.M., Morokuma K.
Can chlorine anion catalyze the reaction of HOCl with HCl.
Chem. Phys. Lett., 1997, 270, 395-398.

67. Hayashi M., Yang T.S., Yu J., Mebel A.M., Lin S.H.
Spectroscopy and ultrafast dynamics in the electron donor-acceptor complex: TCNE-HMB.
J. Phys. Chem. A, 1997, 101, 4156-4162.

68. Mebel A.M., Hayashi M., Lin S.H.
Ab Initio Calculations of Vibronic Coupling. Applications to Symmetry-Forbidden Vibronic Spectra and Internal Conversion in Ethylene
Chem. Phys. Lett., 1997, 274, 281-292.

69. Mebel A.M., Chen Y.-T., Lin S.H.
Ab initio molecular orbital study of excited electronic states of the vinyl radical.
Chem. Phys. Lett., 1997, 275, 19-27.

70. Park J., Dyakov I.V., Mebel A.M., Lin M.C.
Experimental and Theoretical Studies of the Unimolecular Decomposition of Nitrosobenzene: High-Pressure Rate Constants and the C-N Bond Strength
J. Phys. Chem. A, 1997, 101, 6043-6047.

71. Jackson W.M., Mebel A. M., Lin S. H., Lee Y. T.
Using ab initio MO calculations to understand the photodissociation dynamics of CH_2CCH_2 and CH_2C_2
J. Phys. Chem. A, 1997, 101, 6638-6646.

72. Mebel A. M., Lin S. H., Yang X. M., Lee Y. T.
Theoretical Study on the Mechanism of the Dissociation of Benzene. The $C_5H_3 + CH_3$ Product Channel.
J. Phys. Chem. A, 1997, 101, 6781-6789.

73. Wang Y.-L., Mebel A.M., Wu C.-J., Chen Y.-T., Lin C.-E., Jiang J.-C.

Infrared spectroscopic observation and theoretical vibrational calculation of melamine molecule.

J. Chem. Soc., Faraday Trans., 1997, 93, 3445-3451.

74. Liao D.-W., Mebel A.M., Chen Y.-T., Lin S.H.
A Theoretical Study of the Structure, Energetics and the n-π^* electronic transition of the acetone + nH_2O (n=1-3) complexes.
J. Phys. Chem. A, 1997, 101, 9925-9934.

75. Mebel A.M., Lin M.C.
Theoretical studies of reactions of NO_x with nitrogen hydrides.
Int. Rev. Phys. Chem., 1997, 16, 249-266.

76. Hayashi M., Mebel A.M., Liang K.K., Lin S.H.
Internal conversion rate constant for polyatomic molecules. Ab initio study of radiationless transitions between excited and ground singlet electronic states of ethylene.
J. Chem. Phys., 1998, 108, 2044-2055.

77. Mebel A.M., Lin M.C., Melius C.F.
Rate constant of the HONO + HONO $\rightarrow$ H_2O + NO + NO_2 reaction from ab initio MO and TST calculations.
J. Phys. Chem., 1998, 102, 1803-1807.

78. Mebel A.M., Schleyer P.v.R., Charkin O.P., Najafian K.
The structure and nonrigidity of $B_9H_9^{2-}$ and $B_9H_{10}^-$. Comparisons of $B_nH_{n+1}^-$ systems.
Inorg. Chem., 1998, 37, 1693-1703.

79. Mebel A.M., Lin S.H., Pinnaduwage L.A.
Potential energy surfaces of excited states of H_2^-.
Chem. Phys. Lett., 1998, 285, 114-120.

80. Chang A.H.H., Mebel A.M., Yang X.-M., Lin S.H., Lee Y.T.
Ab Initio Calculations of Potential Energy Surface and Rate Constants for Ethylene Photodissociation at 193 and 157 nm
Chem. Phys. Lett., 1998, 287, 301-306.

81. Mebel A.M., Jackson W.M., Chang A.H.H., Lin S.H.
Photodissociation dynamics of propyne and allene: a view from ab initio calculations of the C_3H_n (n = 1-4) species and the isomerization mechanism of C_3H_2.
J. Am. Chem. Soc., 1998, 120, 5751-5763.

82. Hayashi M., Yang T.-S., Yu J., Mebel A.M., Chang R., Lin S.H., Rubtsov I.V., Yoshihara K.
Vibronic and vibrational coherence and relaxation dynamics in the TCNE-HMB complex
J. Phys. Chem. A, 1998, 102, 4256-4265.

83. Chang A.H.H., Mebel A.M., Yang X.-M., Lin S.H., Lee Y.T.

Ab initio/RRKM approach toward the understanding of ethylene photodissociation
J. Chem. Phys., 1998, 109, 2748-2761.

84. Mebel A.M., Lin M.C., Morokuma K.
Ab initio MO and TST calculations for the rate constant of the HNO + $NO_2 \rightarrow$ HONO + NO reaction.
Int. J. Chem. Kinet., 1998, 30, 729-736.

85. Hwang D.-Y., Mebel A.M.
Ab initio study on the reaction mechanism of ozone with chlorine atom
J. Chem. Phys., 1998, 109, 10847-10852.

86. Schleyer P.v.R., Najafian K., Mebel A.M.
The large closo-borane dianinons, $B_nH_n^{2-}$ (n = 13-17) are aromatic, why are they unknown?
Inorg. Chem., 1998, 37, 6765-6772.

87. Ju S.-S., Han C.-C., Wu C.-J., Mebel A. M., Chen Y.-T.
The fragmentation of melamine: A study via electron-impact ionization, laser-desorption ionization and collision-induced dissociation, and density functional calculations of potential energy surface for various dissociation channels.
J. Phys. Chem. B, 1999, 103, 582-596.

88. Mebel A.M., Lin H.L, Lin S.H.
Ab Initio Molecular Orbital and Density Functional Study of the $C_6H_6 \cdot I_2$ Complex in the Ground and Excited Electronic States
Int. J. Quantum Chem., 1999, 72, 307-318.

89. Mebel A.M., Najafian K., Charkin O.P., Schleyer P.v.R.
An ab initio study of protonation of $B_{12}H_{12}^{2-}$. Structure and nonrigidity of $B_{12}H_{13}^-$ and formation of $B_{12}H_{11}^-$ and $B_{24}H_{23}^{3-}$
J. Mol. Struct. (THEOCHEM), 1999, 461-462, 187-202.

90. Mebel A.M., Moskaleva L.V., Lin M.C.
Ab initio MO calculations for the reactions of NH_2 with H_2, H_2O, NH_3, and CH_4: prediction of absolute rate constants and kinetic isotope effects
J. Mol. Struct. (THEOCHEM), 1999, 461-462, 223-238.

91. Mebel A.M., Lin M.C.
Prediction of absolute rate constants for the reactions of NH_2 with alkanes from ab initio G2M/TST calculations
J. Phys. Chem. A, 1999, 103, 2088-2096.

92. Pinnaduwage L.A. , Ding W.X., McCorkle D. L., Lin S.H., Mebel A.M., Garscadden A.
Enhanced electron attachment to Rydberg states in molecular

hydrogen volume discharges
J. Appl. Phys., 1999, 85, 7064-7069.

93. Kaiser R.I., Mebel A.M., Chang A.H.H., Lin S.H., Lee Y.T.
Crossed-beam reaction of carbon atoms with hydrocarbon molecules V: Chemical dynamics of n-C_4H_3 formation from reaction of $C(^3P_j)$ with allene, H_2CCCH_2 (X^1A_1)
J. Chem. Phys., 1999, 110, 10330-10344.

94. Chang A.H.H., Hwang D.W., Yang X.-M., Mebel A.M., Lin S.H., Lee Y.T.
Toward understanding of ethylene photodissociation: theoretical study of energy partition in products and rate constants
J. Chem. Phys., 1999, 110, 10810-10820.

95. Liao D.-W., Mebel A.M., Hayashi M., Shiu Y.J., Chen Y.-T., Lin S.H.
Ab initio study of the n-π^* electronic transition in acetone: symmetry-forbidden vibronic spectra
J. Chem. Phys., 1999, 111, 205-215.

96. Hwang D.-Y., Mebel A.M., Wang B.C.
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38. “Matrix isolation of unstable intermediates in astrophysically relevant ices"
Jamieson C.S., Bennett C.J., Mebel A.M., Kaiser R.I.
Pacifichem 2005, Honolulu, Hawaii, December 15-20, 2005.

39. “An ab initio G3-type study of the indene formation pathways”, Kislov V.V., Mebel A.M., 232nd ACS National Meeting, San Francisco, California, September 10-14, 2006.

40. “Matrix isolation study of high-order carbon oxides (CO_n, n = 3-5)” Jamieson C.S., Mebel A.M., Kaiser R.I., 232nd ACS National Meeting, San Francisco, California, September 10-14, 2006.

41. “Theoretical studies of potential energy surfaces, rate constants, and product branching ratios for the reactions of C_2 and C_3 with unsaturated hydrocarbons” (Invited Lecture), Mebel A.M., Kislov V.V., Kaiser R.I., 232nd ACS National Meeting, San Francisco, California, September 10-14, 2006.

42. “Theoretical studies of the potential energy surface and mechanism of the $C_2H(^2\Sigma^+) + C_4H_2(^1\Sigma_g^+) \rightarrow C_6H_2 + H$ reaction” (Invited Talk) Mebel A.M., Landera A., Kislov V.V. First Workshop on ‘Titan – Observations, Experiments, Computations and Modeling’, Honolulu, Hawaii, February 5-7, 2007.

43. “Theoretical studies of the mechanism and kinetics of elementary combustion and interstellar reactions” (Invited Talk) Mebel A.M., Kislov V.V. Joint Symposiums on Chemical Kinetics and Renewable Energy: From Gas Phase to Condensed Phase, Hsinchu, Taiwan, June 5-9, 2007.

44. “Theoretical studies of reactions of ethynyl radical with unsaturated hydrocarbons related to the growth of organic molecules in Titan’s atmosphere” (Invited Talk) Landera A., Krishtal S. P., Kislov V.V., Mebel A.M. Joint Symposium on Computational Chemistry, Hanoi, Vietnam, December 21-22, 2007.

45. “Theoretical studies of reactions of ethynyl radical with unsaturated hydrocarbons related to the growth of organic molecules in Titan’s atmosphere” (Invited Talk) Landera A., Krishtal S. P., Kislov V.V., Mebel A.M. Second Workshop on ‘Titan – Observations, Experiments, Computations, and Modeling’, Miami, Florida, March 24-26, 2008.

46. “Toward the formation of Titan’s aerosol layers” Zhang F., Gu X., Zhou L., Mebel A.M., Kaiser R.I., Second Workshop on ‘Titan – Observations, Experiments, Computations, and Modeling’, Miami, Florida, March 24-26, 2008.

47. “H elimination and metastable lifetimes in the UV photoexcitation of diacetylene” Silva R., Gichihi W.K., Huang C., Doyle M.B., Kislov V.V., Mebel A.M., Suits A.G., Second Workshop on ‘Titan – Observations, Experiments, Computations, and Modeling’, Miami, Florida, March 24-26, 2008.

48. “An ab initio G3-type/statistical theory study of naphthalene and indene formation pathways originated from reactions of cyclopentadiene and cyclopentadienyl radical” Kislov V.V., Mebel A.M., 235th ACS National Meeting, New Orleans, Louisiana, April 6-10, 2008.

49. “Theoretical studies of chemical reactions of astrochemical relevance” Mebel A.M., Kislov V.V., Kaiser R.I., Gordon Research Conference on Atomic and Molecular Interactions, New London, NH, July 6-11, 2008.

50. “’Cold fusion’ to PAH: A novel photoindiced ethynyl addition mechanism of the formation and growth of polycyclic aromatic hydrocarbons in low-temperature environments” Mebel A.M., Kislov V.V., Kaiser R.I., Dynamics and Spectroscopy of Small Molecules and Biomolecules, Taipei, Taiwan, November 9-12, 2008.

51. “Reaction mechanisms for the formation and growth of aromatic molecules in Titan’s atmosphere” Mebel A.M., Kislov V.V., Jamal A., Kaiser R.I., Third Workshop on ‘Titan – Observations, Experiments, Computations, and Modeling’, San Juan, Puerto Rico, February 26-28, 2009.

52. “Theoretical studies of the reaction mechanism and product branching ratios of C_2H + C_2H_4 and related reactions: The production of vinylacetylene” Krishtal S.P., Mebel A.M., Third Workshop on ‘Titan – Observations, Experiments, Computations, and Modeling’, San Juan, Puerto Rico, February 26-28, 2009.

53. “Theoretical studies of the kinetics of reactions of importance in Titan’s atmospheric chemistry” Klippenstein S.J., Harding L.B., Kislov V.V.Mebel A.M., Third Workshop on ‘Titan – Observations, Experiments, Computations, and Modeling’, San Juan, Puerto Rico, February 26-28, 2009.

54. “Photodissociation of diacetylene dimer and hydrocarbon growth in Titan’s atmosphere” Huang C., Zhang F., Kaiser R.I., Kislov V.V., Mebel A.M., Silva R., Gichihi W.K., Suits A.G., Third Workshop on ‘Titan – Observations, Experiments, Computations, and Modeling’, San Juan, Puerto Rico, February 26-28, 2009.

55. “Growth mechanisms of large organic molecules in low-temperature conditions of Titan’s atmosphere: from polyynes to PAH” Mebel A.M., Kislov V.V., Landera A., Jamal A., Kaiser R.I., International Symposium on Theory of Molecular Structure and Reactivity, Kyoto, Japan, July 19-21, 2009.

56. “Theoretical study of the reaction mechanism and product branching ratios of the reactions of ethynyl radical with allene and methylacetylene in Titan's atmosphere” Mebel A.M., Jamal A., 239th ACS National Meeting, San Francisco, CA, US, March 21-25, 2010.

57. “Theoretical study of the mechanism, rate constants, and product branching ratios for the reaction of phenyl radical with 1,2-butadiene at different temperatures and pressures” Kislov V.V., Mebel A.M., 239th ACS National Meeting, San Francisco, CA, US, March 21-25, 2010.

58. “Homogeneous and heterogeneous hydrocarbon chemistry in Titans atmosphere” Jones B., Zhang F., Maksyutenko P., Mebel A.M., Kaiser R.I., 239th ACS National Meeting, San Francisco, CA, US, March 21-25, 2010.

59. “Primary photodissociation dynamics of hydrocarbons relevant to Titan's atmosphere” Suits A.G, Huang C., Gichuhi W., Silva R., Kislov V.V., Zhang F., Mebel A.M., Kaiser R.I., 239th ACS National Meeting, San Francisco, CA, US, March 21-25, 2010.

60. “Mechanisms of Formation of Nitrogen-Containing Polycyclic Aromatic Compounds in Low-Temperature Environments of Planetary Atmospheres: A Theoretical Study” Landera A., Mebel A. M., Faraday Discussion 147, Chemistry of Planets, Saint Jacut de la Mer, Brittany, France, June 14-16, 2010.

61. “Addition of one and two units of C_2H to styrene: A theoretical study of the $C_{10}H_9$ and $C_{12}H_9$ systems and implication towards Titan’s atmosphere” Landera A., Mebel A.M., Kaiser R.I., Faraday Discussion 147, Chemistry of Planets, Saint Jacut de la Mer, Brittany, France, June 14-16, 2010.

62. “An ab initio/RRKM study of the reaction mechanism and product branching ratios of ethynyl radical (C_2H) with unsaturated hydrocarbons” Jamal A., Mebel A.M., Faraday Discussion 147, Chemistry of Planets, Saint Jacut de la Mer, Brittany, France, June 14-16, 2010.

63. “Primary photodissociation processes important in Titan’s atmosphere” Gichuhi W., Huang C., Zhang F., Kaiser R.I., Kislov V.V., Mebel A.M., Silva R., Suits A.G., Faraday Discussion 147, Chemistry of Planets, Saint Jacut de la Mer, Brittany, France, June 14-16, 2010.

64. “Isomer-specific spectroscopy of gas-phase 1-hydronaphthyl, 2-hydronaphthyl, and 1,2,3-trihydronaphthyl radicals” Sebree J.A., Zwier T.S., Kislov V.V., Mebel A.M., Faraday Discussion 147, Chemistry of Planets, Saint Jacut de la Mer, Brittany, France, June 14-16, 2010.

65. “Theoretical studies of reaction mechanisms of C_2H with unsaturated hydrocarbons in Titan’s atmosphere” Mebel A.M., Landera A., Jamal A., Kaiser R.I., 4th NSF Workshop on Titan “Observations, Experiments, Computations and Modeling”, Saint Jacut de la Mer, France, June 16-18, 2010.

66. “Theoretical studies of reaction mechanisms relevant to hydrocarbon growth in Titan’s atmosphere” Mebel A.M., Jamal A., Landera A., Kaiser R.I., 5th NSF Workshop on Titan “Observations, Experiments, Computations and Modeling”, Poipu Koloa, Kauai, Hawaii, April 11-14, 2011.

67. “An ab initio RRKM study of the mechanism and product branching ratios in the reactions of ethynyl radical with C_4H_6 isomers” Jamal A., Mebel A.M., 5th NSF Workshop on Titan “Observations, Experiments, Computations and Modeling”, Poipu Koloa, Kauai, Hawaii, April 11-14, 2011.

68. “A theoretical study of the potential energy surface for the $C_2 + C_4H_4 \rightarrow C_6H_3 + H$ reaction” Landera A., Mebel A.M., 5th NSF Workshop on Titan “Observations, Experiments, Computations and Modeling”, Poipu Koloa, Kauai, Hawaii, April 11-14, 2011.

69. “Ab initio/RRKM study of the reaction mechanism and product branching ratios of cyano radical (CN) with C_4H_6 isomers” Jamal A., Mebel A.M., 242nd ACS National Meeting & Exposition, Denver, CO, United States, August 28 – September 1, 2011.

70. “Addition of vinylacetylene (C_4H_4) to phenyl radical (C_6H_5): A theoretical and kinetic investigation towards the formation of naphthalene in combustion flames” Landera A., Mebel A.M., 242nd ACS National Meeting & Exposition, Denver, CO, United States, August 28 – September 1, 2011.

71. “Reaction mechanisms of the growth of complex organic molecules including PAH in Titanís atmosphere: A view from theoretical calculations of potential energy surfaces” Mebel A.M., Jamal A., Landera A., Kislov V.V., Kaiser R.I., 6th Workshop on Titan Chemistry ‘Observations, Experiments, Computations, and Modeling’, Miami, Florida, March 12-14, 2012.

72. “Theoretical study of the reaction mechanism and product branching ratios of ethynyl and cyano radical with unsaturated hydrocarbons on Titan” Jamal A., Mebel A.M., 243rd ACS National Meeting & Exposition, San Diego, CA, United States, March 25-March 29, 2012.

73. “Reaction Mechanisms of the Growth of Aromatic and Polycyclic Aromatic Hydrocarbons in Titanís Atmosphere: A View from Theoretical Calculations of Potential Energy Surfaces” Mebel A.M., Jamal A., Landera A., Kislov V.V., Kaiser R.I., Astrobiology Science Conference, Atlanta, Georgia, April 16-20, 2012.

74. “Theoretical studies of chemical reactions related to the formation and growth of polycyclic aromatic hydrocarbons and molecular properties of their key intermediates”, Mebel A.M., 33rd Annual Combustion Research Meeting, Potomac, Maryland, May 29 – June 1 , 2012.

75. “Reaction mechanisms of the growth of polycyclic aromatic hydrocarbons and nitrogen-containing polycyclic aromatic compounds at low temperatures: A view from theoretical calculations of potential energy surfaces”, Landera A., Kislov V.V., Kaiser R.I., Mebel A.M., Faraday Discussion 157, Assisi, Italy, June 25-27, 2012.

76. “Combined photodissociation and pyrolysis study of the dissociation mechanisms of ortho benzyne: A theoretical point of view”, Landera A., Mebel A.M., 244th ACS National Meeting & Exposition, Philadelphia, PA, United States, August 19-23, 2012, PHYS-320.

77. “Formation of Gas-Phased Aromatics From Ethynyl Radical in the Interstellar Medium (ISM) and Planetary Systems: An Ab Initio Quantum Chemical & RRKM Study”, Jamal A., Mebel A.M., 68th Southwest Regional Meeting of the American Chemical Society, Baton Rouge, LA, United States, November 4-7, 2012, SWRM-380.

78. “Theoretical studies of the reactions of dicarbon (C2) with C3H6 and C4H6 and their implications in combustion and astrochemistry”, Landera A., Mebel A.M., 245th ACS National Meeting & Exposition, New Orleans, LA, United States, April 7-11, 2013, PHYS-412.

79. “HACA mechanism revised: Formation of PAHs beyond the second aromatic ring”, Kislov V.V., Mebel A.M., 245th ACS National Meeting & Exposition, New Orleans, LA, United States, April 7-11, 2013, PHYS-79.

80. “Formation of the first aromatic ring in cold planetary atmospheres and the ISM: An ab initio/RRKM study”, Jamal A., Mebel A.M., 245th ACS National Meeting & Exposition, New Orleans, LA, United States, April 7-11, 2013, COMP-390.

81. “Ab initio/RRKM studies of the reactions of dicarbon (C_2) with C_3H_6 and C_4H_6 and their implications in combustion and astrochemistry”, Mebel A.M., Landera A., 89th Florida Annual Meeting and Exposition (FAME 2013) of FLACS, Innisbrook Resort and Golf Club, May 9-11, 2013.

82. “Photochemically induced cold synthesis of complex organic molecules on Titan and in the interstellar medium: A view from ab initio/RRKM calculations”, Mebel A.M., 6th World Congress of Chinese Theoretical and Computational Chemists (WCTCC6), Tamkang University, Taiwan, June 24-28, 2013.

83. “Photochemically induced cold synthesis of complex organic molecules on Titan and in the interstellar medium: A view from ab initio/RRKM calculations”, Mebel A.M., International Conference on Chemical Bonding, Kauai, Hawaii, USA, July 4-8, 2013.

84. “Ab initio/RRKM studies of the reactions of dicarbon (C_2) with C_3H_6 and C_4H_6 and their implications in combustion and astrochemistry”, Landera A., Kaiser, R.I., Mebel A.M., 32nd International Symposium on Free Radicals, Potsdam, Germany, July 21-26, 2013.

85. “Reaction Mechanisms of the Growth of Nitrogen-Containing Polycyclic Aromatic Compounds at Low Temperatures: A View from Theoretical Calculations of Potential Energy Surfaces”, Landera A., Mebel A.M., 246th ACS National Meeting & Exposition, Indianapolis, IN, United States, September 8-12, 2013.

86. “Reaction mechanisms between CH ($X^2\prod$) and CH_4, C_2H_2, C_2H_4, and C_2H_6: An ab initio study”, Ribeiro J.M.L.. Mebel A.M., 247th ACS National Meeting & Exposition, Dallas, TX, United States, March 16-20, 2014.

87. “Roaming Mechanism in Cl Radical Addition-Elimination Reactions with Alkenes”, Joalland B., Shi Y., Kamasah A., Suits A.G., Mebel A.M., 23rd International Symposium on Gas Kinetics and Related Phenomena, Szeged, Hungary, July 21-24, 2014.

88. “Roaming Mechanism in Cl Radical Addition-Elimination Reactions with Alkenes”, Joalland B., Shi Y., Kamasah A., Suits A.G., Mebel A.M., International Conference on Chemical Bonding, Kauai, Hawaii, July 24-28, 2014.

89. “Rate coefficients and product branching ratios for the oxidation of phenyl and naphthyl radicals: A theoretical RRKM-ME study”, Kislov V.V., Singh R.I., Edwards D. E., Mebel A. M., Frenklach M., 35th International Symposium on Combustion, San Francisco, August 4-8, 2014.

90. “Low temperature dynamics and kinetics of the bimolecular reactions between CH (X-$^2\Pi$) and CH_4, C_2H_6, C_2H_4, C_2H_2: An ab initio study”, Ribeiro J.M.L., Mebel A.M., 248th National Meeting of the American Chemical Society, San Francisco, CA, August 10-14, 2014, 554-PHYS.

91. “Bimolecular reactions of dicarbon radicals with C3, C4, and C5 unsaturated hydrocarbons: Energetics and dynamics of combustion intermediates”, Dangi B.B., Parker D.S., Kaiser R., Landera A., Belisario-Lara D., Mebel A.M., 250th ACS National Meeting & Exposition, Boston, MA, United States, August 16-20, 2015, PHYS-20.

92. “Reaction mechanisms and branching ratios between CH ($X^2\Pi$) and C_3H_8, C_3H_6 and C_3H_4: An ab initio study”, Ribeiro J.M.L., Mebel A.M., 250th ACS National Meeting & Exposition, Boston, MA, United States, August 16-20, 2015, PHYS-559.

93. “Mechanisms of PAH growth and oxidation in combustion”, Mebel A.M., Reaction Dynamics Symposium Commemorating IAMS 20th Anniversary, Taipei, Taiwan, November 10-12, 2015.

94. “Mechanisms of PAH growth and oxidation in combustion”, Mebel A.M., 56th Sanibel Symposium, St. Simons Island, Georgia, February 15-19, 2016.

95. “Temperature- and Pressure-Dependent Rate Coefficients for the HACA Pathways from Benzene to Naphthalene”, Mebel A.M., Georgievskii Y., Jasper A.W., Klippenstein S.J., 36th International Symposium on Combustion, Seoul, Korea, July 31 – August 5, 2016.

96. “Pressure Dependent Rate Constants for PAH Growth: Formation of Indene and its Conversion to Naphthalene”, Mebel A.M., Georgievskii Y., Jasper A.W., Klippenstein S.J., Faraday Discussion on Reaction Rate Theory, Cambridge, UK, September 19-21, 2016.

97. “Mechanism and rate constants for PAH growth and oxidation in combustion”, Mebel A.M., 7th International Symposium on Nonequilibrium Processes, Plasma, Combustion and Atmospheric Phenomena (NEPCAP 2016), Sochi, Russia, October 2-7, 2016.

98. “A Combined Molecular Beams and Computational Study on the Decomposition of JP-8 & JP-10 Jet Fuel -From Surrogates to Real Fuel”, Kaiser R.I., Mebel A.M., MACCCR Meeting, Chicago, IL, Oct. 18-21, 2016.

99. “Investigation on pyrolsis of jet propellant 8”, Belisario-Lara, D., Mebel A.M., 253rd ACS National Meeting & Exposition, San Francisco, CA, United States, April 2-6, 2017, PHYS-489.

100. “Trivalent f-metal coordination and extraction by tripodal sulfonamide ligands and analogs”, Govor E.V., Anagnostopoulos V.A., Morozov A.N., Mebel A.M., Raptis R.G., Kavallieratos, K., 253rd ACS National Meeting & Exposition, San Francisco, CA, United States, April 2-6, 2017 (2017), INOR-1138.

101. “Kinetic, product, and computational studies of the ultrasonically induced degradation of 4-methylcyclohexanemethanol (MCHM)”, Cui, D., Mebel A.M., Arroyo-Mora L.E., Holness H., Furton K., O'Shea K.E., 253rd ACS National Meeting & Exposition, San Francisco, CA, United States, April 2-6, 2017, ENVR-510.

102. “Structural, spectroscopic, and theoretical studies on the effects of pyrazole substitution and ion-pairing in binding and sensing of NH_4^+ and Lanthanides(III) by tripodal tris-pyrazole receptors”, Jonah T.M., Govor E.V.; Kandel S., Mathivathanan L., Raptis R.G., Morozov A.N.; Mebel A.M.; Kavallieratos, K., 254th ACS National Meeting & Exposition, Washington, DC, USA, August 20-24, 2017 (2017), I+EC-21.

103. “Theoretical study on pyrolysis of Jet Propellant-8 components: The behavior of aliphatic and non-aliphatic alkyl rings”, Belisario-Lara D., Mebel A., Ribeiro J.M., 254th ACS National Meeting & Exposition, Washington, DC, USA, August 20-24, 2017 (2017), COMP-165.

104. “Recent advances in theoretical studies of reaction mechanisms and rate constants of PAH oxidation and growth in combustion”, Keynote Presentation, Mebel A.M., International Conference on Aerospace Technology, Communications, and Energy Systems (ATCES), Samara, Russia, September 28-30, 2017.

105. “Reaction mechanisms and rate constants of PAH growth in astrophysical environments”, Mebel A.M., 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018 (2018), PHYS-192.

106. “Reaction mechanisms and rate constants of PAH growth in astrophysical environments”, Mebel A.M., FAME 2018, Palm Harbor, FL, USA, May 3-5, 2018.

107. “The mechanism and kinetics of oxidation of cyclopentadienyl radical in combustion flames: A theoretical view”, Ghildina A.R., Oleinikov A.D., Galimova G.R., Azyazov V.N., Mebel A.M., FAME 2018, Palm Harbor, FL, USA, May 3-5, 2018.

108. “Formation and Growth of Polycyclic Hydrocarbons”, Mebel A.M., Computational and Theoretical Chemistry Research PI Meeting, Washington, DC, USA, May 22-24, 2018.

109. “The mechanism and kinetics of oxidation of cyclopentadienyl radical in combustion flames: A theoretical view”, Ghildina A.R., Oleinikov A.D., Galimova G.R., Azyazov V.N., Mebel A.M., International Conference on Combustion Physics and Chemistry, ComPhysChem’18, Samara, Russia, July 24-27, 2018.

110. “On the low-temperature limit of HACA”, Frenklach M.I, Singh R.I., Mebel A.M., 37th International Combustion Symposium, Dublin, Ireland, Jul. 29 – Aug. 3, 2018.

111. “Ultrasonic degradation of an emerging perfluoro ether, Gen X”, Cui D., Mebel A., O'Shea K., 256th ACS National Meeting & Exposition, Boston, MA, United States, August 19-23, 2018, ENVR-112.

112. “Binding and extraction of trivalent lanthanides by tripodal sulfonamides and pyrazoles: structural, theoretical and spectroscopic studies”, Govor E.V., Morozov A.N., Jonah T., Flores G.A., Mebel A.M., Raptis R.G., Kavallieratos K., 256th ACS National Meeting & Exposition, Boston, MA, United States, August 19-23, 2018, INOR-430.

113. “Reaction mechanisms and rate constants of PAH growth in astrophysical environments”, Mebel A.M., The International Worksho of Gas-Phase Kinetics on Interstellar, Atmospheric and Combustion Chemistry, Hefei, China, March 6-9, 2019.

114. “Trisulfonamide and o-sulfonamidophenol ligands as extractants for trivalent actinides from alkaline high-level waste”, Adedoyin O.W., Govor E.V., Morozov A.N., Mebel A.M., Chakraborty I., Raptis R.G., Kavallieratos K., 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 4, 2019, I+EC-0120.

115. “Chemical reaction mechanisms and rate constants of the growth of polycyclic aromatic hydrocarbons (PAH) in combustion flames on Earth, in atmospheres of planets and in the interstellar medium”, Mebel A.M., Conference “Science of the Future”, Sochi, Russia, May 14-17, 2019.

116. “Reaction Mechanisms and Rate Constants of PAH Growth in Astrophysical Environments”, Mebel A.M., Physical Chemistry in Russia and Abroad, Chernogolovka, Russia, June 17-19, 2019.

117. “Reaction Mechanisms and Rate Constants of PAH Growth”, Mebel A.M., Non-linear phenomena and dynamics of flame propagation, Borovoe (Burabay) National Nature Park, Kazakhstan, September 21-25, 2019.

118. “Novel synthesis of 5-, 6-, or 7-iodoindenes”, Howlader A.H., Diaz K., Mebel A.M., Kaiser R., Wnuk S.F., 259th ACS National Meeting & Exposition, Philadelphia, PA, United States, March 22-26, 2020 (2020), ORGN-0332.

119. “Formation of phenanthrenyl radicals via the reaction of acenaphthyl with Acetylene”, Savchenkova A.S., Chechet I.V., Matveev S.G., Frenklach M., Mebel A.M., 38th International Symposium on Combustion, Virtual via The Adelaide Convention Centre, Australia, January 24-29, 2021.

120. “Theoretical studies of interstellar and circumstellar reactions of the silylidyne radical”, Mebel, A. M., Nikolayev A. A., Krasnoukhov V., Kaiser R., 262nd ACS National Meeting & Exposition, Atlanta, GA, United States, August 22-26, 2021 (2021).

121. “On the synthesis of the astronomically elusive 1-Ethynyl-3-silacyclopropenylidene (c-SiC_4H_2) molecule in circumstellar envelopes of carbon-rich asymptotic giant branch stars and its potential role in the formation of the silicontetracarbide chain (SiC_4)”, Yang Z., Doddipatla S., Kaiser R., Nikolayev A. A., Azyazov V. N., Mebel A. M., 262nd ACS National Meeting & Exposition, Atlanta, GA, United States, August 22-26, 2021 (2021).

122. “Formation of Carbonaceous Materials in Deep Space”, Mebel A. M., Pacifichem 2021, Honolulu, HW, Dec. 17, 2021.

123. “Low-temperature oxidation mechanism of a six-member aromatic ring”, Medvedkov I. A., Porfiriev D. P., Zagidullin M. V., Azyazov V. N., Morozov A. N., Mebel A. M., Pacifichem 2021, Honolulu, HW, Dec. 19, 2021.

124. “Cleavage of an aromatic ring and radical migration”, Mebel A.M., Frenklach M., Faraday Discussion: 100 years of the Lindemann mechanism, Oxford, UK, June 22-24, 2022.

125. “Bay capping via acetylene addition to polycyclic aromatic hydrocarbons: Mechanism and kinetics”, Tuli L.B., Mebel A.M., Frenklach M., 39th International Symposium on Combustion, Vancouver, Canada, July 24-29, 2022.

126. “Crystal structure, Hirshfeld analysis, and DFT calculations of ferromagnetically-coupled CuII3-pyrazolato polymorphs”, Rue K., Mezei G., Mathivathanan L., Mebel A.M., Raptis R., Abstracts, 73rd Southeastern Regional Meeting of the American Chemical Society, SERMACS 2022, San Juan, Puerto Rico, October 19-22 2022.

127. “On the mechanisms of soot nucleation”, Mebel A.M., Morozov A.N., Frenklach M., Asia Pacific Conference of Theoretical and Computational Chemistry, APATCC-10, Quy Nhon, Vietnam, February 19-23, 2023.

128. “Electronic structure calculations of the reaction of the methylidyne radical CH with vinylacetylene $H_2CCHCCH$”, Galimova G.R., Mebel A.M., 51st Southeast Theoretical Chemistry Association (SETCA) conference, University of South Carolina, Columbia, SC, USA, May 11-13, 2023.

129. “On the mechanisms of soot nucleation”, Mebel A.M., Morozov A.N., Frenklach M., International Conference on Chemical Kinetics (ICCK-2023), Hefei, China, June 26-29, 2023.

130. “Gas phase synthesis of coronene through a directed ring annulation framework”, Tuli L.B., Mebel, A.M., ACS Fall 2023, San Francisco, CA, United States, 2023.

131. “Ab initio calculations of the reaction of cyclopropane c-C_3H_6 through insertion by ground state carbon atoms $C(^3P_j)$”, Galimova G., Mebel A.M., ACS Fall 2023, San Francisco, CA, United States, 2023.

132. “Computational study of the thermal degradation of perfluoroalkyl ether carboxylic acids”, Paultre C.-B., Mebel A.M., O'Shea K.E., ACS Fall 2023, San Francisco, CA, United States, 2023.

133. “Functionalization of pyrimidine and purine to RNA bases via radical substitution reactions: A theoretical study of reaction pathways toward cytosine, uracil, adenine and guanine”, Mebel A.M., Laboratory Astrophysics Workshop (ICE 2024), Kawaii, HI, USA, Feb. 18-22, 2024.