MATS LARHED *CURRICULUM VITAE*

Address: Department of Medicinal Chemistry, Uppsala University, BMC, Box 574, SE-751 23 Uppsala. **Born:** August 21, 1964. **Civil status:** Married to Agneta Larhed (PhD, Faculty of Pharmacy), children (Fabian, 1995 and Svante, 1997). **Nationality:** Swedish.

Professional preparation

Chemical Engineer	Wenströmska skolan, Västerås	1984
Master of Science in Pharmacy	Uppsala University	1991
PhD, Faculty of Pharmacy	Uppsala University	1997
Pharmacist (license to practice)		1999

Doctorial Dissertation (1997-10-31) in Organic Pharmaceutical Chemistry. Title: Regio-Controlled and Fast Intermolecular Heck Reactions. Palladium-Catalyzed Coupling Reactions with Microwave Heating. Supervisor: Prof. Anders Hallberg

Appointments

Military Service	The Swedish Army, Armored Forces	1984-85
	Military Pharmacy, Sec. lieutenant	1992
Safety Engineer	ASEA-ATOM AB	1985-86
PhD student	Div. Org. Pharm. Chem., UU	1991-97
Parental leave 6 + 6 months		1996-98
Scientist, 25%	Biotage AB, Uppsala	1997-05
Deputy Lecturer	Div. Org. Pharm. Chem., UU	1998-99
Director Comb. Chem. Center	Div. Org. Pharm. Chem., UU	1999-11
Research Associate	Div. Org. Pharm. Chem., UU	2000-01
Senior Lecturer	Div. Org. Pharm. Chem., UU	2001-07
Director of graduate studies	Dep. of Medicinal Chem., UU	2004-11
Head of the Div. Org. Pharm. Chem.	Div. Org. Pharm. Chem., UU	2005-16
Prof. Comb. Med. Chem.	Div. Org. Pharm. Chem., UU	2007-15
Director of graduate studies	Faculty of Pharmacy, UU	2008-11
Head of the Preclinical PET platform	Dep. of Medicinal Chem., UU	2010-17
Deputy Vice President	Medicine and Pharmacy, UU	2011-20
Prof. Medicinal Chemistry	Div. Org. Pharm. Chem., UU	2015-
Elected Vice President	Medicine and Pharmacy, UU	2020-

Awards

The Benzelius Award from the Royal Society of Sciences in Uppsala, Sweden	1998
The Oscar Prize from Uppsala University, Sweden	2002
The National Swedish Prize in Organic Chemistry (The Holmquist Prize)	2014

Commissions of trust

Member of ULLA executive committee	2008-13
Member of the European EIT Health executive committee	2012-15
Chair, SciLifeLab Uppsala Steering Group	2013-
Facility Director, SciLifeLab DDD, Medicinal Chemistry – Lead Identification	2013-
Chair, Drug Discovery & Development Collaboration Steering Group, KI	2014-16
Secretary of the Board EIT Health Scandinavia	2015-20
Member of the Board of the Swedish Pharmaceutical Society	2016-20
EATRIS ERIC National Director, Swedish Research Council	2016-
SciLifeLab Integration Director, UU	2016-
Chair, Board of National Directors, EATRIS ERIC Amsterdam	2018-20

Director, Beijer Laboratory - Drug Discovery	2019-

Memberships in societies and academies

Member of The Royal Society of Sciences in Uppsala	2012-
Member of The Royal Society of Arts and Sciences of Uppsala	2017-
Member of The Royal Swedish Academy of Engineering Sciences (IVA)	2019-

Expert evaluator

Danmarks Akkrediteringsinstutionen, Drug development master committee	2015
Danmarks Akkrediteringsinstutionen, Drug registration master committee	2015
Chair, Quality assurance evaluation of the Swed. Univ. Agricult. Sciences,	2019-2020
Chair, Quality assurance evaluation of the University of Borås	2019-2020

>215 publications, h-index = 60 (Google Scholar), 51 (Web of Science), five approved patents (all sold), faculty opponent 14 times. Invited speaker as plenary or invited lecturer at >30 international congresses and symposia.

Present activities

Work on the local supply plan for Uppsala University. Ongoing strategic development of EIT Health Scandinavia and EATRIS (European infrastructure for translational medicine). Chair for the Quality assurance evaluation (UKÄ) of research at the University of Borås. In parallel, I am continuously engaged in our efforts to discover better pharmaceutical agents for treatment of pulmonary fibrosis (IPF).

Teaching and supervision

Extensive teaching experience from the Master of Science in Pharmacy, the Bachelor of Science in Pharmacy, the Master of Science in Chemical Engineering, and the Biomedicine programs. I have developed nine web lectures which have been viewed >20 000 times.

Previous PhD students (main supervisor) and year of PhD examination: Nils-Fredrik Kaiser (2001), Per-Anders Enquist (2006), Andreas Svennebring (2006), Gopal K. Datta (2008), Riina Arvela (2009), Olof Lagerlund (2009), Kristina Orrling (2009), Fredrik Wångsell (2009), Jonas Lindh (2010), Per Öhrngren (2011), Jonas Sävmarker (2012), Johan Gising (2012), Alejandro Trejos (2012), Linda Axelsson (2014), Ashkan Fardost (2015), Bobo Skillinghaug (2016), Jonas Rydfjord (2017), Linda Åkerbladh (2017), Sara Roslin (2017), Rebecka Isaksson (2019), Ahmed Adeyemi (2020), Karin Engen (2020).

Previous PhD students (deputy supervisor) and year of PhD examination: Kristofer Olofsson (2001), Karl Vallin (2003), Peter Nilsson (2003), Johan Wannberg (2005), Anna Arefalk, (2005), Jennie Georgsson (2006), Jenny Ekegren (2006), Pernilla Örtqvist (2010), Anneli Nordqvist (2011), Anna Lampa (2012), Patrik Nordeman (2014), Anna Karin Belfrage (2015), Marc Stevens (2016).

Previous PostDoc students: Murugaiah M.S. Andappan, PhD, (2002-03), Alexander Stadler, PhD, (2003-04), Henrik von Schenck, PhD, (2003-04), Wu Xiongyu, PhD, (2003-06), Svenja Röttger, PhD, (2005-06), Stefanie Schlummer, PhD, (2005-06), Prasad Appukkutan, PhD, (2005-06), Francesco Russo, PhD, (2006-08), Luke Odell, PhD, (2006-08), Samir Yahiaoui, PhD, (2007-09), Mounir Andaloussi, PhD, (2008-10), Advait Joshi, PhD, (2008-10), Anna Wieckowska, PhD, (2009-11), Krzysztof Wieckowska, PhD, (2009-11), Malte Behrends, PhD, (2010-11), Surisetti Suresh, PhD, (2011-2012), Jean-Baptist Veron, PhD, (2010-2013), Hitesh Motwani, PhD, (2011-2013), Rajendra Mane, PhD, (2011-2013), Maria de Rosa, PhD, (2011-2013), Shyamraj Dharavath, PhD, (2011-2013), Vivek Konda, PhD, (2013-2014), Prasad Wakchaure, PhD, (2013-2015), Prajakta Naik, PhD, (2014-2015), Alexander Wetzel, PhD, (2014-2016), Jayendra Patel, PhD (2016-2017), Tamal Roy (2016-2018), Carlos Palo Nieto (2017-2019), Nadia Petersen (2019-2020).

LIST OF PEER-REVIEWED RESEARCH PAPERS AND BOOK CHAPTERS

1. M. Larhed, C.-M. Andersson, A. Hallberg*: Chelation-controlled, palladium-catalyzed arylation of vinyl ethers.
Acta Chem. Scand., 47 (1993) 212-217.

2. M. Larhed, C.-M. Andersson, A. Hallberg*: Chelation-controlled, palladium-catalyzed arylation of enol ethers with aryl triflates. Ligand control of selection for α- or β-arylation of [2-(dimethylamino) ethoxy]ethene.
Tetrahedron, 50 (1994) 285-304.

3. C. Sonesson, M. Larhed, C. Nyqvist, A. Hallberg*: Regiochemical control and suppression of double bond isomerization in the Heck arylation of 1-(methoxycarbonyl)-2,5 dihydropyrrole.
J. Org. Chem., 61 (1996) 4756-4763.

4. M. Larhed, G. Lindeberg, A. Hallberg*: Rapid Microwave-assisted Suzuki coupling on solid phase.
Tetrahedron Letters, 37 (1996) 8219-8220.

5. M. Larhed, A. Hallberg*: Microwave promoted palladium-catalyzed coupling reactions.
J. Org. Chem., 61 (1996) 9582-9584.

6. M. Larhed, M. Hoshino, S. Hadida, D. P. Curran*, A. Hallberg*: Rapid fluorous Stille coupling reactions conducted under microwave irradiation.
J. Org. Chem., 62 (1997) 5583-5587.

7. M. Larhed, A. Hallberg*: Direct synthesis of cyclic ketals of acetophenones by palladium-catalyzed arylation of hydroxyalkyl vinyl ethers.
J. Org. Chem., 62 (1997) 7858-7862.

8. N. Garg, M. Larhed, A. Hallberg*: Heck arylation of 1,2-cyclohexanedione and 2-ethoxy-2-cyclohexenone.
J. Org. Chem., 63 (1998) 4158-4162.

9. K. Olofsson, M. Larhed, A. Hallberg*: Highly regioselective palladium-catalysed internal arylation of allyltrimethylsilanes with aryl triflates.
J. Org. Chem., 63 (1998) 5076-5079.

10. U. Bremberg, M. Larhed, C. Moberg*, A. Hallberg*: Rapid microwave-induced palladium-catalyzed asymmetric allylic alkylation.
J. Org. Chem., 64 (1999) 1082-1083.

11. C. Moberg*, U. Bremberg, K. Hallman, M. Svensson, P.-O. Norrby, A. Hallberg, M. Larhed, I. Csöregh: Selectivity and reactivity in asymmetric allylic alkylation.
Pure Appl. Chem., 71 (1999) 1477-1483.

12. K. Olofsson, S.-Y. Kim, M. Larhed, D. P. Curran*, A. Hallberg*: High-speed, highly fluorous organic reactions.
J. Org. Chem., 64 (1999) 4539-4541.

13. N.-F. K. Kaiser, U. Bremberg, M. Larhed, C. Moberg*, A. Hallberg*: Microwave mediated palladium-catalyzed asymmetric allylic alkylation; an example of highly selective fast chemistry.
J. Organomet. Chem., 603 (2000) 2-5.

14. K. Vallin, M. Larhed, K. Johansson and A. Hallberg*: Highly Selective Palladium-Catalyzed Synthesis of Protected α,β-Unsaturated Methyl Ketones and 2-Alkoxy-1,3-butadienes. High-Speed Chemistry by Microwave Flash Heating.
J. Org. Chem., 65 (2000) 4537-4542.

15. U. Bremberg, S. Lutsenko, N.-F. K. Kaiser, M. Larhed, A. Hallberg*, C. Moberg*: Rapid and Stereoselective C-C, C-O, C-N and C-S Couplings via Microwave Accelerated Palladium Catalyzed Allylic Substitutions.
Synthesis, (2000) 1004-1008.

16. O. Belda, N.-F. K. Kaiser, U. Bremberg, M. Larhed, A. Hallberg*, C. Moberg*: Highly Stereo- and Regioselective Allylations Catalyzed by Mo-Pyridylamide Complexes - Electronic and Steric Effects of the Ligand.
J. Org. Chem., 65 (2000) 5868-5870.

17. N.-F. K. Kaiser, U. Bremberg, M. Larhed*, C. Moberg, A. Hallberg: Fast, Convenient and Efficient Molybdenum-Catalyzed Asymmetric Allylic Alkylation under Non-Inert Conditions: An Example of Microwave Promoted Fast Chemistry.
Angew. Chem. Int. Ed. Engl., 39 (2000) 3595-3598.

18. K. Olofsson, M. Larhed, A. Hallberg*: Highly Regioselective Palladium-Catalysed Internal Arylation of *N*,*N*-Dialkylallylamines.
J. Org. Chem., 65 (2000) 7235-7239.

19. D. P. Curran, S. Hadida, A. Studer, M. He, S.-Y. Kim, Z. Luo, M. Larhed, A. Hallberg, B. Linclau: Experimental Techniques in Fluorous Synthesis: A User's Guide.
In *Combinatorial Chemistry: A Practical Approach*, H. Fenniri, Ed.; Oxford Univ. Press, 2000, 338-340.

20. M. Larhed*, A. Hallberg: Microwave-Assisted High-Speed Chemistry. A New Technique in Drug Discovery.
Drug Discovery Today, 6 (2001) 406-416.

21. K. Olofsson, H. Sahlin, M. Larhed, A. Hallberg*: Regioselective Palladium-Catalysed Synthesis of Internally Arylated Primary Allylamine Equivalents.
J. Org. Chem., 66 (2001) 544-549.

22. K. Vallin, M. Larhed and A. Hallberg*: Aqueous DMF-Potassium Carbonate as Substitute for Thallium and Silver Additives in the Palladium-Catalyzed Conversion of Aryl Bromides to Acetyl Arenes.
J. Org. Chem. 66 (2001) 4340-4343.

23. P. Nilsson, M. Larhed and A. Hallberg*: Highly Regioselective, Sequential and Multiple Palladium-Catalyzed Arylations of Vinyl Ethers Carrying a Coordinating Auxiliary. An Example of a Heck Triarylation Process.
J. Am. Chem. Soc., 123 (2001) 8217-8225.

24. N.-F. K. Kaiser, A. Hallberg and M. Larhed*: In Situ Generation of Carbon Monoxide from Solid Molybdenum Hexacarbonyl. A Convenient and Fast Route to Palladium-Catalyzed Carbonylation.
J. Comb. Chem., 4 (2002) 109-111.

25. A. Bengtson, A. Hallberg and M. Larhed*: Fast Synthesis of Aryl Triflates with Controlled Microwave Heating.
Org. Lett., 4 (2002) 1231-1233.

26. A. Bengtson, M. Larhed and A. Hallberg*: Protected Indanones by a Heck – Aldol Annulation Reaction.
J. Org. Chem., 67 (2002) 5854-5856.

27. M. Larhed*, C. Moberg and A. Hallberg: Microwave Accelerated Homogeneous Catalysis in Organic Chemistry.
Acc. Chem. Res., 35 (2002) 717-727.

28. Y. Wan, M. Alterman*, M. Larhed and A. Hallberg*: Dimethylformamide as a Carbon Monoxide Source in Fast Palladium-Catalyzed Aminocarbonylations of Aryl Bromides.
J. Org. Chem., 67 (2002) 6232-6235.

29. P. Nilsson, H. Gold, M. Larhed* and A. Hallberg: Microwave-Assisted Enantioselective Heck Reactions. Expediting High Reaction Speed and Preparative Convenience.
Synthesis, (2002) 1611-1614.

30. K. S. A. Vallin, P. Emilsson, M. Larhed* and A. Hallberg: High-Speed Heck Reactions in Ionic Liquid with Controlled Microwave Heating.
J. Org. Chem., 67 (2002) 6243-6246.

31. M. Larhed, A. Hallberg: Scope, Mechanism and Other Fundamental Aspects of the Intermolecular Heck Reaction.
In *Handbook of Organopalladium Chemistry for Organic Synthesis*, E. Negishi, Ed. Vol. I; Wiley-Interscience, 2002, 1133-1178.

32. K. Olofsson, A. Hallberg and M. Larhed: Transition Metal-Catalysis and Microwave Flash-Heating in Organic Chemistry.
In *Microwaves in Organic Synthesis. First Edition*, A. Loupy Ed. Wiley-VCH, 2002, 379-403.

33. Y. Wan, M. Alterman*, M. Larhed and A. Hallberg: Formamide as a Combined Ammonia Synthon and Carbon Monoxide Source in Fast Palladium-Catalyzed Aminocarbonylations of Aryl Halides.
J. Comb. Chem., 5 (2003) 82-84.

34. C. Fermér, P. Nilsson, M. Larhed*: Microwave-Assisted High-Speed PCR.
Eur. J. Pharm. Sci., 18 (2003) 129-132.

35. J. Georgsson, A. Hallberg and M. Larhed*: Fast Palladium-Catalyzed Ester-Synthesis from Aryl Iodides Utilizing $Mo(CO)_6$ as a Solid Carbon Monoxide Source.

J. Comb. Chem., 5 (2003) 350-352.

36. P. Nilsson, M. Larhed and A. Hallberg*: A New Highly Asymmetric Chelation-Controlled Heck Arylation.
J. Am. Chem. Soc., 125 (2003) 3430-3431.

37. D. Nöteberg, W. Schaal, E. Hamelink, L. Vrang and M. Larhed*: High-Speed Optimization of Inhibitors of the Malarial Proteases Plasmepsin I and II.
J. Comb. Chem., 5 (2003) 456-464.

38. G. K. Datta, K. S. A. Vallin and M. Larhed*: A Rapid Microwave Protocol for Heck Vinylation of Aryl Chlorides Under Air.
Mol. Div., 7 (2003) 107-114.

39. K. S. A. Vallin, Q. Zhang, M. Larhed*, D. P. Curran* and A. Hallberg: A New Regioselective Heck-Vinylation with Enamides. Synthesis and Investigation of Fluorous-Tagged Bidentate Ligands for Fast Separation.
J. Org. Chem., 68 (2003) 6639-6645.

40. J. Wannberg and M. Larhed*: Increasing Rates and Scope of Reactions: Sluggish Amines in Microwave-Heated Aminocarbonylation Reactions under Air.
J. Org. Chem., 68 (2003) 5750-5753.

41. M. M. S. Andappan, P. Nilsson, M. Larhed*: Arylboronic Acids as Versatile Coupling Partners in Fast Microwave Promoted Oxidative Heck Chemistry.
Mol. Div., 7 (2003) 97-106.

42. M. M. S. Andappan, P. Nilsson, M. Larhed*: The First Ligand-Modulated Oxidative Heck Vinylation. Efficient Catalysis with Molecular Oxygen as Palladium(0) Oxidant.
Chem. Commun., (2004) 218-219.

43. P.-A. Enquist, P. Nilsson and M. Larhed*: Superfast Chemistry: Cobalt Carbonyl-Mediated Synthesis of Diaryl Ketones under Microwave Irradiation.
Org. Lett., 5 (2003) 4875-4878.

44. A. Svennebring, P. Nilsson and M. Larhed*: Microwave-Promoted and Chelation-Controlled Double Arylations of Terminal Olefinic Carbon of Vinyl Ethers.
J. Org. Chem., 69 (2004) 3345-3349.

45. K. Orrling, P. Nilsson, M. Gullberg* and M. Larhed*: An Efficient Method to Perform Milliliter-Scale PCR Utilizing Highly Controlled Microwave Thermocycling.
Chem. Commun. (2004) 790-791.

46. K. Ersmark, M. Larhed* and J. Wannberg: Microwave-Enhanced Medicinal Chemistry: A High-Speed Alternative for Convenient Preparation of Protease Inhibitors.
Curr. Opin. Drug Discovery Dev., 7 (2004) 417-427.

47. M. M. S. Andappan, P. Nilsson, H. von Schenck and M. Larhed*: Dioxygen Promoted Regioselective Oxidative Heck Arylations of Electron-Rich Olefins with Arylboronic Acids.
J. Org. Chem., 69 (2004) 5212-5218.

48. A. Stadler, H. von Schenck, K. S. A. Vallin, M. Larhed* and A. Hallberg: Terminal Heck Vinylations of Chelating Vinyl Ethers.
Adv. Synth. Catal. 346 (2004) 1773-1781.

49. M. A. Herrero, J. Wannberg and M. Larhed*: Direct Microwave Synthesis of *N,N'*-Diacylhydrazines and *Boc*-Protected Hydrazides by *In-Situ* Carbonylations under Air.
SynLett, (2004) 2335-2338.

50. K. Olofsson and M. Larhed: Microwave-Assisted Fluorous Chemistry.
In *Handbook of Fluorous Chemistry,* J. A. Gladysz, D. P. Curran, I. T. Horváth, Eds. Wiley-VCH, 2004, 359-365.

51. P. Nilsson and M. Larhed: Palladium-Catalyzed Multiple and Asymmetric Arylations of Vinyl Ethers Carrying Coordinating Nitrogen Auxiliaries: Synthesis of Arylated Ketones and Aldehydes.
In *Catalysts for the Fine Chemical Synthesis, Vol. 3, Metal Catalysed Carbon-Carbon Bond-Forming Reactions,* S. M. Roberts, J. Whittall and P. McCormack, Eds. John Wiley and Sons, 2004, 92-99.

52. X. Wu, P. Nilsson and M. Larhed*: Microwave-Enhanced Carbonylative Generation of Indanones and 3-Acylaminoindanones.
J. Org. Chem. 70 (2005) 346-349.

53. A. Arefalk, M. Larhed and A. Hallberg*: Masked 3-Aminoindan-1-ones by a Palladium-Catalyzed Three-Component Annulation Reaction.
J. Org. Chem. 70 (2005) 938-942.

54. J. Wannberg, D. Dallinger, C. O. Kappe* and M. Larhed*: Novel Microwave-Enhanced and Metal-Catalyzed Functionalizations of the 4-Aryl-Dihydropyrimidone Template.
J. Comb. Chem. 7 (2005) 574-583.

55. P.-A. Enquist, J. Edin, P. Nilsson and M. Larhed*: Super Fast Cobalt Carbonyl-Mediated Synthesis of Urea Compounds.
Tetrahedron Lett. 46 (2005) 3335-3339.

56. X. Wu, R. Rönn, T. Gossas and M. Larhed*: Easy-to-Execute Carbonylations: Microwave Synthesis of Acyl Sulfonamides using $Mo(CO)_6$ as a Solid Carbon Monoxide Source.
J. Org. Chem. 70 (2005) 3094-3098.

57. J. Wannberg, N.-F. K. Kaiser, L. Vrang, B. Samuelsson, M. Larhed and A. Hallberg*: High-Speed Synthesis of Potent C2-Symmetric HIV-1 Protease Inhibitors by in-situ Aminocarbonylations.
J. Comb. Chem. 7 (2005) 611-617.

58. A. Svennebring, N. Garg, P. Nilsson, A. Hallberg and M. Larhed*: A One-Pot Isomerization–Arylation of 2,3-Epoxycyclohexanone under Controlled Microwave Heating.
J. Org. Chem. 70 (2005) 4720-4725.

59. H. Gold, M. Larhed and P. Nilsson*: Microwave Irradiation as a High-Speed Tool for Activation of Sluggish Aryl Chlorides in Grignard Reactions.
SynLett (2005) 1596-1600.

60. J. Georgsson, C. Sköld, B. Plouffe, G. Lindeberg, M. Botros, M. Larhed, F. Nyberg, N. Gallo-Payet*, A. Gogoll, A. Karlén and A. Hallberg*: Angiotensin II Pseudopeptides Containing 1,3,5-Trisubstituted Benzene Scaffolds with High AT_2 Receptor Affinity.
J. Med. Chem. 48 (2005) 6620-6631.

61. X. Wu and M. Larhed*: Microwave-Enhanced Aminocarbonylations in Water.
Org. Lett. 7 (2005) 3327-3329.

62. K. Olofsson and M. Larhed: Microwave Accelerated Metal Catalysis. Organic Transformations at Warp Speed.
In *Microwave Assisted Organic Synthesis*, J. P. Tierney, P. Lidström, Eds. Blackwell Publishing, 2005, 23-43.

63. O. Lagerlund and M. Larhed*: Microwave-Promoted Aminocarbonylations of Aryl Chlorides Using $Mo(CO)_6$ as a Solid Carbon Monoxide Source.
J. Comb. Chem. 8 (2006) 4-6.

64. P.-A. Enquist, J. Lindh, P. Nilsson and M. Larhed*: Open-Air Oxidative Heck Reactions at Room Temperature.
Green Chemistry. 8 (2006) 338-343.

65. H. Gold, A. Ax, L. Vrang, B. Samuelsson, A. Karlén, A. Hallberg and M. Larhed*: Fast and Selective Synthesis of Novel Cyclic Sulfamide HIV-1 Protease Inhibitors under Controlled Microwave Heating.
Tetrahedron. 62 (2006) 4671-4675.

66. X. Wu, J. Wannberg and M. Larhed*: Hydroxylamine as an Ammonia Equivalent in Microwave-Enhanced Aminocarbonylations.
Tetrahedron. 62 (2006) 4665-4670.

67. A. Arefalk, J. Wannberg, M. Larhed* and A. Hallberg: Stereoselective Synthesis of 3-Aminoindan-1-ones and Subsequent Incorporation into HIV-1 Protease Inhibitors.
J. Org. Chem. 71 (2006) 1265-1268.

68. X. Wu, J. K. Ekegren and M. Larhed*: Microwave-Promoted Aminocarbonylation of Aryl Iodides, Aryl Bromides and Aryl Chlorides in Water.
Organometallics. 25 (2006) 1434-1439.

69. J. K. Ekegren, N. Ginman, Å. Johansson, H. Wallberg, M. Larhed, B. Samuelsson, T. Unge and A. Hallberg*: Microwave Accelerated Synthesis of P1′-Extended HIV-1 Protease Inhibitors Encompassing a Tertiary Alcohol in the Transition-State Mimicking Scaffold.
J. Med. Chem. 49 (2006) 1828-1832.

70. G. K. Datta, H. von Schenck, A. Hallberg, M. Larhed*: Selective Terminal Heck Arylation of Vinyl Ethers with Aryl Chlorides: A Combined Experimental-Computational Approach Including Synthesis of Betaxolol.

J. Org. Chem. 71 (2006) 3896-3903.

71. J. Wannberg, Y. A. Sabnis, L. Vrang, B. Samuelsson, A. Karlén, A. Hallberg and M. Larhed*: A New Structural Theme in C2-Symmetric HIV-1 Protease Inhibitors: *ortho*-Substituted P1/P1' Side Chains.
Bioorg. Med. Chem. 14 (2006) 5303-5315.

72. M. Larhed*, J. Wannberg and A. Hallberg: Controlled Microwave Heating as an Enabling Technology: Expedient Synthesis of Protease Inhibitors in Perspective.
QSAR Comb. Sci. 26 (2007) 51-68.

73. P. Nilsson, K. Olofsson and M. Larhed*: Microwave-Assisted and Metal-Catalyzed Coupling Reactions.
Top. Curr. Chem. 266 (2006) 103-144.

74. J. Wannberg, K. Ersmark and M. Larhed*: Microwave-Accelerated Synthesis of Protease Inhibitors.
Top. Curr. Chem. 266 (2006) 167-198.

75. P.-A. Enquist, P. Nilsson, P. Sjöberg* and M. Larhed*: ESI-MS Detection of Reaction Intermediates in the Air- Promoted and Ligand-Modulated Oxidative Heck Reaction.
J. Org. Chem. 71 (2006) 8779-8786.

76. J. K. Ekegren, J. Gising, H. Wallberg, M. Larhed, B. Samuelsson and A. Hallberg*: Variations of the P2 Group in HIV-1 Protease Inhibitors Encompassing a Tertiary Alcohol in the Transition-State Mimicking Scaffold.
Org. Biomol. Chem. 4 (2006) 3040-3043.

77. K. Olofsson, P. Nilsson and M. Larhed: Accelerated Chemistry: Microwave, Sonochemical, and Fluorous Phase Techniques. In *Exploiting Chemical Diversity for Drug Discovery*, M. Entzeroth and P. A. Bartlett, Eds. Royal Chemical Society, 2006, 33-53.

78. K. Olofsson, P. Nilsson and M. Larhed: Microwave-Assisted Transition Metal-Catalyzed Coupling Reactions. In *Microwaves in Organic Synthesis. Second Edition*, A. Loupy Ed. Wiley-VCH, 2006, 685-725.

79. S. Röttger, P. J. R. Sjöberg, M. Larhed*: Microwave-Enhanced Copper-Catalyzed *N*-Arylation of Free and Protected Amino Acids in Water.
J. Comb. Chem. 9 (2007) 204-209.

80. J. Georgsson, C. Sköld, M. Botros, F. Nyberg, A. Karlén, A. Hallberg, M. Larhed*: Synthesis of a New Class of Drug-like Angiotensin II C-terminal Mimics With Affinity for The AT_2 Receptor.
J. Med. Chem. 50 (2007) 1711-1715.

81. O. Lagerlund, L. R. Odell, S. L. Mowbray, M. T. Nilsson, W. W. Krajcewski, A. Nordqvist, A. Karlén, M. Larhed*: Microwave-Enhanced α-Arylation of a Protected Glycine in Water. Evaluation of 3-Phenylglycine Derivatives as Inhibitors of the Tuberculosis Enzyme, Glutamine Synthetase.
Comb. Chem. High Throughput Screen. 10 (2007) 783-789.

82. R. K. Arvela, S. Pasquini, M. Larhed*: Highly Regioselective Internal Heck Arylation of Hydroxyalkyl Vinyl Ethers by Aryl Halides in Neat Water.
J. Org. Chem. 72 (2007) 6390-6396.

83. A. Svennebring, P. Nilsson, M. Larhed*: Microwave-Accelerated Spiro-Cyclizations of *o*-Halobenzyl Cyclohexenyl Ethers by Palladium(0) Catalysis
J. Org. Chem. 72 (2007) 5851-5854.

84. A. Svennebring, Per J. R. Sjöberg, M. Larhed, P. Nilsson*: A mechanistic study on modern palladium catalyst precursors as new gateways to Pd(0) in cationic Heck reactions.
Tetrahedron, 64 (2008) 1808-1812.

85. X. Wu, P. Öhrngren, J. K. Ekegren, J. Unge, T. Unge, H. Wallberg, B. Samuelsson, A. Hallberg, M. Larhed*: Two-Carbon-Elongated HIV-1 Protease Inhibitors with a Tertiary-Alcohol-Containing Transition-State Mimic.
J. Med. Chem. 51 (2008) 1053-1057.

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EDITED BOOKS

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   October 2006, 289 pages, Hardcover, Topics in Current Chemistry Series, 266
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2. Cross-Coupling and Heck-Type Reactions 3. Metal-Catalyzed Heck-Type Reactions and C-H Couplings
   M. Larhed (Ed.) and L. R. Odell (Assoc. Ed.)
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EDITORIAL BOARDS

1. Editorial Advisory Board, Journal of Combinatorial Chemistry, ACS. 2003-06

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ACADEMIC THESIS

Doctorial Dissertation: Larhed, M. 1997. Regio-Controlled and Fast Intermolecular Heck Reactions. Palladium-Catalyzed Coupling Reactions with Microwave Heating. Acta Universitatis Upsaliensis. Comprehensive Summaries of Uppsala Dissertations from the Faculty of Pharmacy 171. 92 pp. Uppsala. Supervisor: Prof. Anders Hallberg.

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POPULAR SCIENCE

1. M. Larhed: Mikrovågor sätter fart på långsam reaktion.
   Kemisk Tidskrift / Kemivärlden (1997) 31-32.

2. M. Larhed: Ifrån dragskåp till Läkemedelskandidat, på ”Olof Rudbeckdagen”, 20 oktober 2006, Uppsala, Sverige.

3. Nobel Prize winners visit Uppsala University - Nobel Prize in Chemistry (2010).
   https://www.youtube.com/watch?v=FPcsu6HDwWQ

INVITED LECTURES

1. M. Larhed. High-Speed Metal-Catalyzed Organic Transformations, at “Transforming Medicinal Chemistry”, Aprile 12-14, 2000, Cambridge, UK.

2. M. Larhed. High-Speed Combinatorial Chemistry, at “Molecular Recognition”, January 24-25, 2001, Sigtuna, Sweden.

3. M. Larhed. Microwave-Assisted Transition Metal-Catalyzed Reactions: Medicinal and Combinatorial Chemistry Applications, at “High-Throughput Organic Synthesis”, February 13-15, 2002, San Diego, USA.

4. M. Larhed. High-Speed Transition-Metal Catalyzed Organic Reactions with Microwave Flash Heating, at “Chirasource2002 Europe”, April 8-10, 2002, Lisbon, Portugal.

5. M. Larhed. Transition Metal-Catalysis and Microwave Flash-Heating in High-Speed Organic Chemistry, at “Advances in Productive Chemistry Development”, May 29-31, 2002, San Diego, USA.

6. M. Larhed. Nya och snabba palladiumkatalyserade kopplingsreaktioner, at ”18:e Organikerdagarna”, June 10-13, 2002, Sundsvall, Sweden.

7. M. Larhed. Recent Advances in High-Speed Microwave-Assisted Organic Synthesis, at “Finnish Chemical Congress – Drug Discovery”, November 12-14, 2002, Helsinki, Finland.

8. M. Larhed. Microwave-Assisted Transition Metal-Catalyzed Reactions: Medicinal and Combinatorial Applications, at “Microwellenunterstützte Organische Synthese zur Schnellen und Erfolgreichen Syntheseoptimierung”, December 10, 2002, Tübingen, Germany.

9. M. Larhed. High-Speed Optimization of Malarial Plasmepsin I and II Inhibitors, at “Eurocombi 2”, June 29- July 3, 2003, Copenhagen, Denmark.

10. M. Larhed. High-Speed Metal-Catalyzed Organic and Medicinal Chemistry, at the “Microwave Chemistry Day”, November 4, 2003, Leibnizhaus, Hannover, Germany.

11. M. Larhed. Microwave-Assisted High-Speed Chemistry, at “Scheele Symposium, Biotech Forum Science Conference”, November 27, 2003, Stockholm, Sweden.

12. M. Larhed. Controlled Microwave Heating: A High-Speed Opportunity for Convenient Development and Exploitation of Metal-Mediated Organic Reactions, at “The 228th ACS National Meeting”, August 22, 2004, Philiadelphia, USA.

13. M. Larhed. Novel Metal-Catalyzed or Metal-Mediated Organic Transformations under Microwave Irradiation, at “Microwave Assisted Organic Synthesis”, September 20-21, 2004, Graz, Austria.

14. M. Larhed. Environmentally friendly and microwave-assisted palladium chemistry, at “Trends in Organic Chemistry - Green Chemistry”, December 3, 2004, Lund, Sweden.

15. M. Larhed. Novel Heck Reactions: Oxidative Arylations Under Air and Microwave-Accelerated Couplings, at “The 14th European Symposium on Organic Chemistry”, July 4-8, 2005, Helsinki, Finland.

16. M. Larhed. Microwave-Accelerated Optimization of Protease Inhibitors, at "Symposium on Microwave Accelerated Synthesis", September 14-16, 2005, Düsseldorf, Germany.

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19. M. Larhed. Recent Advances in Microwave-Assisted Metal Catalyzed Organic and Medicinal Chemistry, at Discovery Chemistry Congress and Microwave Assisted Organic Synthesis 2007, October 3-4, 2007, South San Francisco, USA.

20. M. Larhed. Design and Synthesis of Novel Enzyme Inhibitors. Focus on Microwave-Acceleration and Metal-Catalyzed Transformations, at 23rd European Colloquium on Heterocyclic Chemistry (ECHC08), September 9-13, 2008, Antwerp, Belgium.

21. M. Larhed. Oxidative Heck Reactions, at CRC International Symposium 2008, November 3, 2008, Stockholm, Sweden.

22. M. Larhed. Palladium(II)-Catalyzed Coupling Reactions Under Microwave Radiation, at Zing Microwave and Flow Chemistry Conference, January 28-31, 2009, Bolans Village, Antigua and Barbuda.

23. M. Larhed. Microwave-Assisted Palladium(II)-Catalyzed Coupling Reactions at MAOPS 2009 - Microwave Assisted Organic and Peptide Synthesis, June 4-5, 2009, La Grande Motte, France.

24. M. Larhed. Fast Chemistry and Development of New HIV-1 Protease Inhibitors at Université de Sherbrooke Bisannual Conference, 22-23 March, 2010, Sherbrooke, Canada.

25. M. Larhed. HIV-1 Protease Inhibitors with a Transition-State Mimic Comprising a Tertiary Alcohol at Proteins, Peptides and Peptidomimetics: Applications in Drug Discovery and Drug Development, 7-8 February, 2011, Uppsala, Sweden.

26. M. Larhed. Efficient Palladium(II)-Catalysis. Oxidative Heck Couplings and Addition Reactions at XXIV Congresso Nazionale della Società Chimica Italiana, 11-16 September, 2011, Lecce, Italy.

27. M. Larhed. A Non-Resonant Microwave Applicator for Continuous Flow Chemistry at 2013 Microwave & Flow Chemistry Conference, 28 February to 2 March, 2012, Puerto Calero, Lanzarote, Spain.

28. M. Larhed. Synthesis and Evaluation of Shielded HIV-1 Protease Inhibitors at The 20th Anniversary of the Foundation of the European University Consortium for Advanced Pharmaceutical Education and Research, 19 June 2012, Amsterdam, The Netherlands.

29. M. Larhed. The Strategies and Capacities of the Faculties of Medicine and Pharmacy at Uppsala University in the PET and Imaging Area at The 5th Hallym-Uppsala International Symposium, 19 September 2012, Seoul, Korea.

30. M. Larhed. Continuous Flow Chemistry Using a Non-Resonant Microwave Applicator at FloHet-2013, Florida Heterocyclic and Synthetic Conference, 3-6 March, 2013, Gainesville, USA.

31. M. Larhed. Examples of Continuous Flow Chemistry Using A Novel Non-Resonant Microwave Applicator at Flow Chemistry Europe, 19-20 March, 2013, Munich, Germany.

32. M. Larhed. Continuous Flow Organic Synthesis Using A Novel Non-Resonant Microwave Instrument at Balticum Organicum Syntheticum 2014 (BOS 2014), 6-9 July, 2014, Vilnius, Lithuania.

33. M. Larhed. Microwave Promoted Transesterification Reaction of Sulfonylcarbamates Under Continuous-Flow Conditions at 4th Zing Continuous Flow Chemistry Conference, 25-28 April, 2016, Albufeira, Portugal.

CONFERENCE CHAIR

1. Proteins, Peptides and Peptidomimetics: Applications in Drug Discovery and Drug Development, February 7-8, 2011, Uppsala, Sweden. M. Larhed, Chair of Organization Committee.

2. In joint battle against infectious disease and antibiotic resistance, 23 November, 2012, Uppsala, Sweden. M. Sörby and M. Larhed, Chairmen of the Organization Committee.

CONFERENCE COMMITTEE

1. Healthcare for Healthy Ageing, Uppsala Health Summit, June 3-4, 2014, Uppsala, Sweden. M. Larhed, Member of Organization Committee.

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