


149. C. Brackmann, G. Pengloan, J. Bood, Ö. Andersson and M. Aldén, Quantitative Measurements of Species and Temperature in a DME-Air Counterflow Diffusion Flame using Laser Diagnostic Methods, Comb Science and Tech., v 178, no 6, p 1165-1184, 2006


153. Z.S. Li, M. Rupinski, J. Zetterberg and M. Aldén, Mid-infrared PS and LIF detection of CH4 and C2H6 in cold flows and flames at atmospheric pressure, Comb Inst 30 1629-1636, (2005)


219. O. Johansson, J. Bood, M. Aldén and U. Lindblad, Hydroxyl radical consumption following photolysis of vapour-phase hydrogen peroxide at 266 nm: Implications for photofragmentation laser-induced fluorescence measurements of hydrogen

220. Z. W. Sun, Z. S. Li, B. Li, M. Aldén, and P. Ewart, Detection of C2H2 and HCl using mid-infrared degenerate four-wave mixing with stable beam alignment: towards practical in situ sensing of trace molecular species, Appl Phys B. 98, 593-600, 2010


252. R. Wellander, M. Richter and M. Aldén, Time resolved 3D imaging (4D) of two phase flow at a repetition rate of 1 kHz, Opt. Express 19, 21508-21514 (2011)


262. Z. W. Sun, M. Försth, Z. S. Li, B. Li, and M. Aldén, In-situ measurements of HCN in a tube furnace with infrared polarization spectroscopy, Fire and Safety Science, 10, 279(2012)


266. C. Duwig, B. Li, Z. S. Li and M. Aldén, High resolution imaging of flameless and distributed turbulent combustion, Comb. and Flame, 159, 306-3016 (2012)


271. E. Kristensson, E. Berrocal and M. Alden, Quantitative 3D imaging of scattering media using structured illumination and computed tomography, Optics Express. 20, 14437 (2012).


279. J, Duong, R. Wellander, J. Hyvönen, Ö. Andersson, M. Richterm B. Johansson and M. Aldén, High speed combustion imaging in a large bore gas engine, the relationship between pre- and main chamber heat release, ASME., IMCE2013-64286, 2013


282. P. C. Miles, B. Li, Z-S.Li, and M. Aldén, Atmospheric Pressure Acetylene Detection by UV Photo-fragmentation and Induced C₂ Emission, Appl. Sectr. 67, 66 (2013)


327. Z. W. Sun, Y. He, A. L. Sahlberg, B. Li, Z. S. Li and M. Aldén, Mid-infrared polarization spectroscopy for minor species detection in particle-laden combustion environments, Submitted for publication (2014)


331. G. Särner, U. Göransson, M. Richter and M. Aldén, Surface temperatures measured through a heated solid porous material using diffusive scattered laser induced phosphorescence, Submitted to Fire and Materials (2014)


335. Z. M. Li, J. Rosell, X. S. Bai; M. Richter, M. Aldén, High speed multiple species imaging in a methane/air jet flame to investigate flame local quenching and healing, Submitted for publication, 2014.


338. H. Carlsson, E. Nordström; A. Bohlin, Y. Wu; B. Zhou; Z. S. Li; M. Aldén; P.-E. Bengtsson and; X. S. Bai, Numerical and Experimental study of Flame Propagation and Quenching of Lean Premixed Turbulent Low Swirl Flames at Different Reynolds Numbers, Submitted to Comb. and Flame, 2014

339. P. H. Joo, J. L. Gao, Z. S. Li and M. Aldén, Experimental apparatus with full optical access for combustion experiments with laminar flames from a single circular nozzle at elevated pressures, Submitted for publication


342. J. Borggren, I. Burns, A.-L. Sahlberg, Z.-S. Li and M. Aldén, Temperature Imaging in Low-pressure Flames using Diode Lasers, Submitted for publication

343. B. Zhou, Q. Li, Y. He, P. Petersson, Z. S. Li, M. Aldén, X.-S. Bai, Visualization of multi-regime turbulent combustion in swirl-stabilized lean premixed, Submitted for publication, 2014


345. B. Zhou, C. Brackmann, Z.S Li, M. Aldén and X.S. Bai, Multi-scalar imaging of small-scale structures in turbulent premixed flames from flamelet to distributed reactions, Submitted for publication, 2014.
Conference contributions


74. M. Aldén, "Combustion Diagnostics with Lasers", Invited talk at IQEC'92 Vienna, Austria, Juen 14-19 1992


78. P.-E Bengtsson, L. Martinsson and M. Aldén, "Rotational CARS measurements in an IC engine", Poster presented at ECW '93 XII European CARS Workshop, PSI, Villigen, Switzerland, March 22-23 1993

79. P.-E Bengtsson and M. Aldén, "Soot volume Fraction Imaging using Laser Techniques; Laser-Induced Fluorescence in C2 from Laser-Vaporized Soot (LIF(C2)LVS, and Laser-Induced Soot Incandescence (LII), Rouen, December 5-7 1993


84. L. Martinsson, P.-E Bengtsson and M. Aldén, "On the possibility to measure temperatures and oxygen concentrations using dual broadband rotational CARS, with a relative standard deviation of single-shot values only limited by detector noise", Abstract for paper at XIII European CARS Workshop, Paris, France, March 21-22 1994


91. M. Aldén, "Utveckling och tillämpning av laserspektroskopisk teknik för diagnostik av motorförbränning", Småskalig förbränning av biobränslen, Göteborg, 17 maj 1994

94. P.-E Bengtsson and M. Aldén, "2-D imaging of soot volume fraction using Laser-Induced Fluorescence in C₂ from Laser-Vaporised Soot (LIF(C₂) LVS)" Poster presented at 25th Int Symp on combustion, Irvine, CA, USA, 1994
95. T. Berglind, A. Saizkoff, R. Reinmann and M. Aldén, "Characterization on the early stages of spark ignition and flame development", Periodic Report IDEA EFFECT JOU2-CT92-0162, 9401-9406
100. L. Martinsson, P.-E Bengtsson and M. Aldén, "On the possibility to measure temperatures and oxygen concentrations using dual, broadband rotational CARS, with a relative standard deviation of single-shot values only limited by detector noise", Paper presented at XIII ECW, Paris, March 21-22 1994


111. F. Ossler, S. Agrup and M. Aldén, "Picosecond laser based studies applied to combustion and flow phenomena", Poster presented at Gordon Conf, Plymouth, NH, USA, 1995

112. R. Reinmann, A. Saitzkoff, M. Akram, T. Berglind and M. Aldén, "IDEA EFFECT, Characterization of the early stages of spark ignition and flame development", Contract JOU2-CT92-0162, Periodic report 950101-950630 Presented at Warwick University, Coventry, GB


120. N. Georgiev and M. Aldén, "2D multiphoton multispecies imaging of combustion species", Paper presented at 26th Symp on Comb (Int) Funchal, Madeira, April 1-4 1996
126. C. Löfström, Kaaling and M. Aldén, "Visualization of fuel distributions in premix ducts to a low-emission gas turbine combustor using laser techniques”, Paper presented at 26th Symp on Comb (Int) Funchal, Madeira, April 1-4 1996


137. F. Ossler and M. Aldén, ”Picosecond laser based studies applied to combustion”, Paper presented at Int Workshop on Molecular Energy Transfer in Small Radicals, Bielefeld, Germany, March 4-5 1997


146. J. Engström, C. Kaminski and M. Aldén, “Quasi-instantaneous two-dimensional temperature measurements in a spark ignition engine using 2-line atomic


164. F. Ossler, T. Metz and M. Aldén, “Picosecond laser-induced fluorescence from gas-phase polycyclic aromatic hydrocarbons at elevated temperatures“, IEA-TLM, OhTSU, Japan Sept 26-29, 1999


205. R. Collin, Ö. Andersson, R. Eg nell, J. Bood, B. Axelsson, H. Neij, and M. Aldén, Optical investigations of DME used as Diesel fuel. Proceedings to Scandinavian-Nordic Section of the Combustion Institute, Open seminar on Alternative Fuels for Engines, Gothenburg, November 15th, 2006


229. Z.-W. Sun, M. Försth, Z. S. Li, B. Li and M. Aldén, In situ detection of HCN and HCl as products from burning polymers with spatially resolved mid-infrared polarization spectroscopy (IRPS), European Combustion Meeting 14th April, 2009, Vienna.


231. Bo Li, Yu Li, Zhihua Wang, Zhongshan Li, Zhiwei Sun, Marcus Aldén, A novel multi-jet quartz burner for laminar near-adiabatic flames: Standard of temperatures for the calibration of laser diagnostics techniques, European Combustion Meeting 14th April, 2009, Vienna.


234. Z.-W. Sun, Z. S. Li, B. Li, and M. Aldén, Detection of C2H2 and HCl using mid-infrared degenerated four-wave mixing with a novel beam arrangements: Towards practical in situ trace molecular species sensing, European Combustion Meeting 14th April, 2009, Vienna.


239. Z.W. Sun, N. Dam, Z.S. Li*, M. Aldén NCN detection in atmospheric flames, Paper presented at the Joint Scandinavian-French Section of the Combustion Institute, Snekkersten, Nov. 2009
247. Johannes Kiefer, Zhongshan Li, Marcus Aldén: Multiplex Laser-Induced Fluorescence for Two-Dimensional Flame Front Visualization: Opportunities and Challenges, 14-17 August, GRC poster 2009.
249. Zhongshan Li, Zhiwei Sun, Bo Li and Marcus Aldén: Mid-infrared polarization spectroscopy and degenerate 4-wave mixing for detection at trace level of key species in combustion related processes, 14-17 August, GRC poster 2009.

252. Z.W. Sun, Z.S. Li, M. Aldén, Mid-infrared degenerate four-wave mixing for molecular concentration and temperature measurements in combustion environments, Work-in-progress Poster at the 33rd International Symposium on Combustion, Beijing, China, August 1–6, 2010

253. Z.W. Sun, Z.S. Li, and M. Aldén, ‘Degenerate four-wave mixing probing molecular ro-vibrational transitions for spatially resolved nonintrusive measurements of molecular concentrations and temperatures at combustion environments’, ECONOS / ECW 2010 (21-23 June 2010, Bremen, Germany)


256. C. Duwig, B. Li, Z.S. Li, M. Aldén, ‘High resolution imaging of flameless and distributed turbulent combustion’, Work-in-progress Poster at the 33rd International Symposium on Combustion, Beijing, China, August 1–6, 2010


295. Z.W. Sun, Z.S. Li, B. Zhou, B. Li, Susan Lindenkrazt, H. Nilsson and M. Aldén, High resolution emission spectroscopy in 1800 -600 cm^{-1} from one dimension laminar CH\textsubscript{4}/O\textsubscript{2}/N\textsubscript{2} lean and rich flames, Work in progress poster presentation at the 34th International Symposium on Combustion, Warzawa 2012.


(EOSAM 2012), Aberdeen Exhibition and Conference Centre, Scotland, 25 September 2012 - 28 September, 2012


315. B. Zhou, Z. S. Li, C. Brackmann and M. Aldén, Development of single-shot CN PLIF imaging in premixed turbulent flames using an Alexandrite laser system,


361. P. Joo, Z. S. Li, and M. Aldén, Design of high pressure experimental apparatus with optical access for combustion experiments, paper presented at the joint British-Scandinavian meeting of the Combustion Institute, Cambridge, April 2014


Invited talks (selected)


6. Industrial Applications of CARS Spectroscopy", Invited contribution to special session on "Industrial applications of Raman spectroscopy" The XI'th Int. Conf. on Raman Spectroscopy, London 1988


9. Combustion Diagnostics with Lasers, IQEC'92, Vienna, Austria, June 14-19 1992


11. Applications of Laser-Induced Fluorescence and CARS for Combustion Diagnostics, M Aldén, P-E Bengtsson, C Lönström and H Neij, , Deutsche Bunsengesellschaft f Physikalische Chemie Meeting on Laser Diagnostics for Industrial Processes, Heidelberg, Germany, June 28-July 1 1993


15. Applications and Developments of Laser Spectroscopic Techniques for Combustion Diagnostics, Nordic Seminar on Gas Analysis in Combustion, Tampere, Finland October 4-5 1994


17. Investigation of NO detection in flames using Polarization Spectroscopy, Paper presented at XIV European CARS Workshop ECW'95, El Escorial, Spain, March 29-31 1995

18. Two Photon Degenerate Four Wave Mixing Spectroscopy of Molecular Nitrogen, XV European CARS Workshop, Sheffield, UK, March 27-28 1996

19. 12 invited lectures at Xi'an Modern Chemistry Research Institute, PR China, May-28-June 7, 1996


21. Laserdiagnostiska tekniker för studier av förbränningsprocesess, SVEA Förbränningsmotorn i takt med tiden?!, Scania, Södertälje, 21 nov, 1996

22. Förbränning och hur det kan påverka miljön, Göteborgs Int Vetenskapsfestival, April 29, 1997

23. ERCOFTAC Summerschool, Aachen Germany, Sept 14-17, 1997


30. Development of laser techniques for applications in combustion engines, Haus der Technik, Essen, Germany, Sept 26, 2000


32. Development and application of laser techniques for combustion diagnostics, Invited paper at the workshop on Monitoring of air pollution due to Combustion Processes, Univ of Cape Coast, Ghana, Nov 1-3, 2000


36. Combustion at the focus: laser diagnostics and control, K. Kohse-Höinghaus, R. S. Barlow, M. Aldén and J. Wolfrum, “Invited talk at the 30th Comb Inst Symposium, 2004

37. Challenges for IC engines diagnostics using laser techniques, Clean I.C Engines and Fuels, Louvain-la Neuve, Belgium, April 7th 2005.


40. Development and applications of laser spectroscopic techniques related to combustion diagnostics, 2nd ICOLAD, London Sept. 12-14, 2005,

41. Development of laser diagnostic techniques for combustion applications, COMBURA, Utrecht, Oct 14, 2005

42. Laser diagnostics on unsteady flames”, FLUISTCOM, Delft 20 jan, 2006

44. Multiple-parameter visualization in combustion using laser diagnostic techniques, 5th World Congress on Industrial Process Tomography Bergen, Sept. 3-6, 2007


48. Developments and applications of Laser Techniques for Combustion Studies, Plenary lecture at the European Combustion Meeting, Wien 09,

49. Laserbaserad förbränningsdiagnostik: Lysande Forskning inom ett hett område, Royal Academy of Sciences, May 2009


51. Development and application of laser diagnostic techniques for combustion studies, Annual meeting of Finnish National Committee of IFRF, Helsinki, January 14th, 2010

52. Förbränningsens fysik och optiska forskningsmetoder, Teknikens dag, Helsingfors 2010

53. Visualization and understanding of combustion processes using spatially and temporally resolved laser diagnostic techniques; Plenary Lecture at the 33rd Symp (Int.) on Combustion, Beijing 2010

54. Recent developments in laser diagnostics of combustion processes, Danish Optical Society, Risö, 2010

55. Recent developments in laser diagnostics, JM Burger course, Eindhoven, 2010

56. Coordinated Swedish combustion research within CECOST and Lase diagnostics of unsteady combustion processes, NORDITA, Stockholm 2010


58. Lecture at the FLOW Centre Annual meeting, Stockholm 2011- Trends in Combustion Research
59. Laser Diagnostics of Combustion research, Ten invited lectures at the Princeton CEFRC Summer School, 2011


65. Laser diagnostics in Combustion, Fifteen invited lectures at the Tsinghua Summer School, Beijing, 213

66. Lases diagnostics in Combustion, Four Invited lectures at the Tianjin University Summer School 2013,


68. Lasers in Combustion: Tools or Toys, Invited talk at the 8th Mediterranean Combustion Symposium, Izmir Turkey, Sept 2013


70.
Miscellaneous: (Investigations, reports, travel reports, etc)


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17. M. Aldén m fl, "Combustion Centre", Information brochure 1991

18. M. Aldén m fl, "Combustion Centre, Biennial report 1990-92"


