



Veröffentlichungen

Konferenzbeiträge

- [1] SCHOLZ, R. and JESCHAR, R. *Untersuchungen über die Zerstäubung von schwerem Heizöl an einer neuen Versuchsbrennkammer in Oberhausen.* 2nd IFRF Members Conference. 1971.
- [2] SCHOLZ, R. *Berechnung der Zweiphasen-Zweikomponenten-Nebelströmung bei Expansion auf hohe Geschwindigkeiten unter besonderer Berücksichtigung von Gaszerstäuberbrennern für Heizöl.* PhD thesis. TU Clausthal, 1972.
- [3] JESCHAR, R. and SCHOLZ, R. *Der thermische Schutz von Bauten. ? Bestimmung der Schutzwirkung von Schutzräumen und Maßnahmen zur Verlängerung der Schutzwirkungsdauer.* Jahrestagung der Schutzkommission beim Bundesministerium des Inneren, Erlangen, Germany. 1975.
- [4] WEBER, R. *The Optimization of Diameter of Long Pipe-Line for Isothermal and Adiabatic Flow of Ideal and Half-Ideal Gas.* Masterarbeit. Chemical Engineering and Chemical Technology Department, The Technical University of Silesia, Gliwice, Poland, 1975.
- [5] JESCHAR, R., SCHOLZ, R., and WEIMAR, R. *Der thermische Schutz von Bauten.* Jahrestagung der Schutzkommission beim Bundesministerium des Inneren. 1976.
- [6] TOMECZEK, J. and WEBER, R. *An Approach to Mathematical Model of a Gas Flame in Complex Shape.* Heat and Mass Transfer Symposium, Warsaw-Jablonna, Poland. 1976.
- [7] WEBER, R. *Two-dimensional Mathematical Model of a Gas Diffusion Flame in Closed System.* PhD thesis. Chemical Engineering and Chemical Technology Department, The Technical University of Silesia, Gliwice, Poland, 1979.
- [8] TOMECZEK, J. and WEBER, R. *Modelling of Turbulent Flow with Chemical Reaction.* 2nd International Congress on Numerical Methods in Engineering, Dunod, Paris. 1980.
- [9] WEBER, R. *Modelling of Combustion Flow with Radiative Heat Transfer.* PTMTiS Symp, Szczyrk, Poland. 1980.
- [10] WEBER, R. *Isothermal Mixing of Two Parallel Gaseous Jets.* PTMTiS Symp., Wisla, Poland. 1981.
- [11] BOYSAN, F., WEBER, R., SWITHENBANK, J., and AYERS, W. A. *Mathematical Modeling of Heterogeneous Combustion in Strongly Swirling Flows.* International Symposium on Refine Modeling of Flows, Paris, France. 1982.
- [12] BOYSAN, F., WEBER, R., and SWITHENBANK, J. *Mathematical Modelling of an Entrained Coal Gasifier.* International Gas Research Conference, London, UK. 1983.



- [13] SWITHENBANK, J., HEDLEY, A. B., BOYSAN, F., WEBER, R., and GARBETT, E. S. *Recent Progress in Coal Combustion, Gasification and Hot Gas Cleanup. Research at Sheffield University.* International Energy Agency Meeting, Sandia, Livermore, USA. 1983.
- [14] WEBER, R., BOYSAN, F., and SWITHENBANK, J. *Design Procedure for an Entrained Coal Gasifier.* Symposium Fuels from Coal and Furnaces of Tomorrow, Longwith College, University of York, UK. 1983.
- [15] JESCHAR, R., SCHOLZ, R., and KÖHLER, C. *Probleme bei der technischen Verbrennung.* Energieseminar der Asphalt-Industrie, Willingen, Germany. 1984.
- [16] JESCHAR, R., SCHOLZ, R., and REINERS, U. *Heat Transfer During One- and Two Phase Water-Spray Cooling of Hot Metals.* Proceedings of The 6th Japan-Germany Seminar. 1984.
- [17] JESCHAR, R., SCHOLZ, R., and URLAU, U. *Zur Berechnung der Ausbildung von Feuerstürmen.* Jahrestagung der Schutzkommission beim Bundesministerium des Inneren. 1984.
- [18] JESCHAR, R., SCHOLZ, R., and SCHOPF, N. *Heißentschwefelung in Drallbrennkammersystemen und einem isothermen Rohrreaktor.* 12. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 574), Karlsruhe, Germany. 1985.
- [19] JESCHAR, R., SCHOLZ, R., SCHOPF, N., and HÜNLICH, T. *Direct Sulphur Capture at High Temperatures in a Combustion Chamber System with Swirl.* IX. International Symposium on Combustion Processes. 1985.
- [20] SCHOLZ, R. *Voraussetzungen für die Meß- und Regeltechnik beim Betrieb von metallurgischen Öfen.* 16. Metallurgisches Seminar der GDMB, Kassel, Germany. 1985.
- [21] WEBER, R., BOYSAN, F., BOLADO, R., YULE, A., and SWITHENBANK, J. *Spray Combustion Modelling of Small and Large Droplets of Heavy Fuel Oil.* 3rd International Conference on Liquid Atomisation and Spray Systems, London, UK. 1985.
- [22] JESCHAR, R., REINERS, U., and SCHOLZ, R. *Heat Transfer During Water and Water-Air Spray Cooling in the Secondary Cooling Zone of Continuous Casting Plants.* 5th International Iron and Steel Congress, Proceedings 69th Steelmaking Conference, Washington, USA. 1986.
- [23] JESCHAR, R., REINERS, U., and SCHOLZ, R. *Wärmeübertragung in der Sekundärkühlzone von Stranggießanlagen.* Stranggießen Symposium der Deutschen Gesellschaft für Metallkunde, DGM Informationsgesellschaft Verlag, Oberursel, Germany. 1986.
- [24] JESCHAR, R., SCHOLZ, R., and URLAU, U. *Heat Transfer During Casting of Thinner Strips.* 7th Japan-Germany Seminar on Fundamentals of Iron and Steelmaking, VDEh, Düsseldorf, Germany. 1987.



- [25] SMART, J. P. and WEBER, R. *Advanced NO_x Reduction Techniques Using Staged Combustion*. International Conference on Coal Science, Maastricht, Netherlands. 1987.
- [26] WEBER, R., VISSER, B. M., and BOYSAN, F. *Calculation of Turbulent Swirling Flows*. International Specialists Meeting on Solid Fuel Utilization, The Combustion Institute, Lisbon, Portugal. 1987.
- [27] SCHOLZ, R. and SCHOPF, N. *Environmental Protective Combustion Process For Waste Fuels*. 1st European Conference on Industrial Furnaces and Boilers (INFUB), Lisbon, Portugal. 1988.
- [28] SCHOLZ, R., SCHOPF, N., and HAEFFNER, E. *Ultrafine Grinding of Limestone in a Planetary Ball Mill and Tests to Determine Product Suitability for Flue-Gas Desulphurization by the Dry-Additive Process*. 16th International Mineral Processing Congress, Stockholm, Sweden. 1988.
- [29] JESCHAR, R., SCHOLZ, R., R., W., and KOEHN, H. v. *Schadstoffarme Verbrennung von belasteten, flüssigen Brennstoffen*. 14. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 765), Göttingen, Germany. 1989.
- [30] SCHOLZ, R. and SCHOPF, N. *General Design Concept for Combustion Processes for Waste Fuels and some Test Results of Pilot Plants*. 1989 Incineration Conference, Knoxville, USA. 1989.
- [31] SMART, J. P. and WEBER, R. *Fundamentals of NO_x Reduction and Burnout Optimization Using Aerodynamic Air Staging and Fuel Rich Precombustion*. Joint International Conference. Australia/ New Zealand and Japanese Sections, University of Sydney, Sydney, Australia. 1989.
- [32] VISSER, B. M. and WEBER, R. *Computations of Near Burner Zone Properties of Semi-Industrial Pulverised Coal Flames*. 14. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 765), Göttingen, Germany. 1989.
- [33] BARTH, H.-J., GÜR, M., MORGENROTH, S., and SCHOLZ, R. *Application of ceramics for hot gas radial fans for temperatures up to 1250° C*. Energy Conference Ceramics in Energy Applications, Sheffield UK AND Ceramics in Energy Applications, Adam Hilger, Bristol and New York, USA. 1990.
- [34] DUGUÉ, J. and WEBER, R. *The Effect of Fuel Gun Design and Local Heat Release on Swirling Flames Aerodynamics*. 5th International Symposium on Application of Laser Techniques to Fluid Mechanics, Lisbon, Portugal. 1990.
- [35] WEBER, R. and VISSER, B. M. *Mathematical Modelling of Swirling Pulverised Coal Flames - A Short Review of the Recent IFRF Work*. DVV-Colloquium: Modelling und Diagnostic Stationärer Verbrennung, RWTH, Aachen, Germany. 1990.
- [36] SCHOLZ, R. and BECKMANN, M. *Möglichkeiten der Verbrennungsführung bei Restmüll in Rostfeuerungsanlagen*. Prozeßführung und Verfahrenstechnik der Müllverbrennung (VDI Berichte 895), Düsseldorf, Germany. 1991.



- [37] STEINEBRUNNER, K., BECKER, R., SEIFERT, H., SCHOLZ, R., and STERNBERG, J. *Untersuchungen zur thermischen Entsorgung von NO-haltigen Ablüften*. 15. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 922), Bochum, Germany. 1991.
- [38] STEINEBRUNNER, K., BECKER, R., SEIFERT, H., SCHOLZ, R., and STERNBERG, J. *Verfahrenstechnik zur schadstoffarmen Verbrennung von Erdölrückständen*. 15. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 922), Bochum, Germany. 1991.
- [39] VISSER, B. M. and WEBER, R. *Mathematical Modelling of Swirl-Stabilised Pulverised Coal Flames of Thermal Input in the Range 200 kW to 54 MW*. 15. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 922), Bochum, Germany. 1991.
- [40] WEBER, R. *Reduction of NO_x with Pulverized Coal Firing*. Symposium "Rookgasemissie: regelgeving, controle en reductie?", T.U. Eindhoven, Netherlands. 1991.
- [41] DUGUÉ, J. and WEBER, R. *Laser Velocimetry in Semi-Industrial Natural Gas, Oil and Coal Flames by Means of an water-cooled LDV Probe*. 6th International Symposium on Application of Laser Anemometry in Fluid Mechanics, Lisbon, Portugal. 1992.
- [42] WEBER, R., DUGUÉ, J., SAYRE, A., and HORSMAN, H. *Aerodynamics and Low-NO_x Characteristics of Natural Gas Flames Issued from a Generic Burner*. Preprints of 1992 International Gas Research Conference, Orlando, Florida. 1992.
- [43] KLÖPPNER, G., SCHOLZ, R., and JESCHAR, R. *On the Simplified Calculation of the NO Formation in Technical Combustion*. The International Conference Energy Systems and Ecology ENSEC, Cracow, Poland. 1993.
- [44] MALEK, C., SCHOLZ, R., and JESCHAR, R. *Vereinfachte Modellierung der Stickstoffoxidbildung unter gleichzeitiger Berücksichtigung des Ausbrandes bei einer Staubfeuerung*. 16. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 1090), Clausthal-Zellerfeld, Germany. 1993.
- [45] SCHOLZ, R., JESCHAR, R., MATSCHULLAT, T., REICHELT, W., and URLAU, U. *Problems of metal feeding for single belt strip casters*. The Iron and Steel Institute of Japan. The 8th Japan-Germany Seminar. 1993.
- [46] SCHOLZ, R., SCHULENBURG, F., and BECKMANN, M. *Kriterien zur Beurteilung thermischer Behandlungsverfahren für Rückstände*. Techniken der Restmüllbehandlung, Kalte und/oder Thermische Verfahren (VDI-Berichte 1033). 1993.
- [47] WEBER, R., PETERS, A. A. F., BREITHAUPT, P. P., and VISSER, B. M. *Mathematical Modeling of Swirling Pulverized Coal Flames: What Can Combustion Engineers Expect from Modeling?* Presented at International ASME/EPRI Power Generation Conference, Kansas City, USA. 1993.



- [48] BARTH, H.-J., JAKEL, R., KRAUSHAAR, H., and SCHOLZ, R. *Gestaltung eines keramischen Heißgasventilators für 1300°C*. Kolloquium zum Sonderforschungsbereich 180 "Konstruktion verfahrenstechnischer Maschinen bei besonderen mechanischen, thermischen oder chemischen Belastungen" ACHEMA. 1994.
- [49] BECKMANN, M. and SCHOLZ, R. *Modellvorstellungen zum Feststoffumsatz bei Rückständen in Rostfeuerungen*. GVC-Symposium Abfallwirtschaft: Herausforderung und Chance, Würzburg, Germany. 1994.
- [50] DUGUÉ, J., MBIÖCK, A., and WEBER, R. *Mixing Characterization in Semi-Industrial Natural Gas Flames using Planar Mie Scattering Visualization*. 7th International Symposium on Application of Laser Techniques to Fluid Mechanics, Lisbon, Portugal. 1994.
- [51] LALLEMANT, N. and WEBER, R. *Evaluation of Seven Approximate Emissivity Models for CFD Modelling of Non-Luminous Flames*. Proceedings of EURO THERM Seminar No. 37, Heat Transfer in Radiating and Combusting Systems, ENEA Research Centre, Saluggia, Italy. 1994.
- [52] MALEK, C. and SCHOLZ, R. *Thermische Behandlung von koksartigen staubförmigen Reststoffen*. GVC-Symposium Abfallwirtschaft: Herausforderung und Chance, Würzburg, Germany. 1994.
- [53] PETERS, A. A. F. and WEBER, R. *Mathematical Modelling and Scaling of Fluid Dynamics and NO_x Characteristics of Natural Gas Burners*. 1994 International ASME/EPRI Power Generation Conference, Phoenix, Arizona, USA. 1994.
- [54] SCHOLZ, R., BECKMANN, M., and SCHULENBURG, F. *Möglichkeiten der thermischen Behandlung von Abfällen*. Umweltkongreß des Landes Sachsen-Anhalt, Tagungsband Teil 2, Magdeburg, Germany. 1994.
- [55] SCHOLZ, R., JESCHAR, R., FUCHS, W., and JENNES, R. *Umweltgesichtspunkte bei der Herstellung und Anwendung von Kalkprodukten*. 8. Internationaler Kalkkongreß in Berlin. 1994.
- [56] SCHOLZ, R. and SCHULENBURG, F. *Moderne Verfahren zur thermischen Abfallverwertung*. 1. Rostocker Umwelttag, Rostock, Germany. 1994.
- [57] SCHOLZ, R., SCHULENBURG, F., and BECKMANN, M. *Experimental research on gasification of coarse waste on a stoker system and separate afterburning as well as optimization with the aid of a process model*. The 1994 International Incineration Conference, Houston, USA. 1994.
- [58] SCHOLZ, R. and STERNBERG, J. *Verfahrenstechnik der Verbrennungsführung zur Minderung von Schadstoffemissionen aus Brennkammerfeuerungen*. Energie und Umwelt, Freiberg, Germany. 1994.
- [59] BECKMANN, M. and SCHOLZ, R. *Simplified Mathematical Model of the Combustion in Stoker Systems*. 3rd European Conference on Industrial Furnaces and Boilers (INFUB), Lisbon, Portugal. 1995.



- [60] DAHM, W., DRISCOLL, J., WEBER, R., SERAUSKAS, R., and KEZERLE, J. *Scaling of Aerodynamics and Low NO_x Emissions in Natural Gas Burners from 30 kW to 12 MW*. 1995 International Gas Research Conference, Cannes, France. 1995.
- [61] DUGUÉ, J., HORSMAN, H., MBIÖCK, A., and WEBER, R. *Flow Visualization and Mixing Characterization in Industrial Natural Gas Flames*. 1995-International Gas Research Conference, France, Cannes. 1995.
- [62] SCHOLZ, R., BECKMANN, M., and SCHULENBURG, F. *Systemy spalania odpadów; stan obecny i perspektywy rozwoju*. TEMPUS workshop on mathematical modelling in energy systems and processes. 1995.
- [63] SCHOLZ, R., BECKMANN, M., and SCHULENBURG, F. *Thermische Verfahren zur Abfallbehandlung; Prozeßführung, Bausteine und Bewertung*. Thermische Abfallentsorgung (VDI-Berichte 1192). 1995.
- [64] SCHOLZ, R., BECKMANN, M., and SCHULENBURG, F. *Waste Incineration Systems; Current Technology and Future Developments in Germany*. 3rd European Conference on Industrial Furnaces and Boilers (INFUB), Lisbon, Portugal. 1995.
- [65] STERNBERG, J., R., S., and JESCHAR, R. *Verfahrenstechnik zur schadstoffarmen Verbrennung von hochmolekularen organischen Rückständen*. Energie und Umwelt 95, Freiberg. 1995.
- [66] WEBER, R., SAYRE, A., LALLEMANT, N., DUGUÉ, J., DAHM, W. J. A., DRISCOLL, J. F., HSIEH, A., and WU, M. S. *Scaling of Aerodynamics and NO_x Emissions of Swirl Stabilized Natural Gas Burners ? The Scaling 400 Study*. Invited Lecture of the joint meeting of the Central States/Western States/Mexican National Sections of the Combustion Institute and the American Flame Research Committee, San Antonio, USA. 1995.
- [67] WEICHERT, C., SCHOLZ, R., STEINEBRUNNER, K., and SEIFERT, H. *Verbrennung von NH₃-haltigen Prozeßgasen unter besonderer Berücksichtigung von Inertgaseinflüssen*. 17. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 1193), Hamburg, Germany. 1995.
- [68] BARTH, H.-J., JAKEL, R., KRAUSHAAR, H., and SCHOLZ, R. *Vollkeramischer SiSiC-Radialventilator bis 1350 °C für Industrieofenanlagen - Konstruktion, FEM-Berechnungen, Förderverhalten, Betriebserfahrungen*. Ventilatoren im industriellen Einsatz III (VDI-Berichte 1249). 1996.
- [69] SCHOLZ, R. and BECKMANN, M. *Determination of Measured Variables and Complex Parameters through Measurement Techniques and Specific Experimental Procedures in Thermal Waste Treatment*. Measurement techniques in energy systems and processes TEMPUS Structural Joint European Project. 1996.
- [70] SCHOLZ, R., BECKMANN, M., and SCHULENBURG, F. *Entwicklungsmöglichkeiten der Prozeßführung bei Rostsystemen zur thermischen Abfallbehandlung*. FDBR-



Symposium, Fakten! Die Thermische Abfallverwertung der Zukunft, Rostock, Germany. 1996.

- [71] SCHOLZ, R. and SCHULENBURG, F. *Prozeßführung bei Verfahren zur thermischen Restabfallbehandlung in Kombination mit mechanisch-biologischer Vorbehandlung*. UTECH Berlin '96: Zukunft der thermischen Behandlung von Restabfällen, Berlin. 1996.
- [72] WEBER, R. *Research & Development in Burner Technology*. Studiedag - Branders in de processindustrie, Utrecht, Netherlands. 1996.
- [73] BECKMANN, M., SCHOLZ, R., WIESE, C., BUSCH, M., and PEPPLER, E. *Gasification of waste materials in grate systems*. 4th European Conference on Industrial Furnaces and Boilers (INFUB), Porto, Portugal. 1997.
- [74] BECKMANN, M., SCHOLZ, R., WIESE, C., BUSCH, M., and PEPPLER, E. *Gasification of waste materials in grate systems*. Feuerungstechnik, Kaleidoskop aus aktueller Forschung und Entwicklung. ISBN 3-00-001593-0. 1997.
- [75] BECKMANN, M., WIESE, C., DAVIDOVIC, M., and SCHOLZ, R. *Gasification of Waste Materials in Grate Systems*. International Conference on Incineration and Thermal Treatment Technologies, Oakland, California, USA. 1997.
- [76] SCHOLZ, R., BECKMANN, M., and SCHULENBURG, F. *Modellierung und Vergleich verschiedener Feuerungsführungen in Rostsystemen*. 18. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 1313), Delft, Netherlands. 1997.
- [77] SCHOLZ, R. and C., W. *Elektrostahl-Erzeugung*. Verlag Stahleisen, 1997. Chap. Auslegung wassergekühlter Bauteile in Elektrolichtbogenöfen S. 176–193.
- [78] SCHOLZ, R. and WEICHERT, C. *Possibilities of Evaluating the Energy Input in Electric Steel Production of an Electric Arc Furnace with Scrap Preheating in a Shaft and Postcombustion of the Flue Gas*. New concept in the energy sector TEMPUS Structural Joint European Project SJEP-07397-94; Zakopane-Gliwice, Poland. 1997.
- [79] SCHULENBURG, F., SCHOLZ, R., and BECKMANN, M. *Modelling and Comparison of Various Combustion Operation Modes in Grate Systems for the Thermal Treatment of Waste*. 15th International Symposium on Combustion Processes, Zakopane, Polen. 1997.
- [80] WEBER, R., BREUSSIN, F., PETERS, A. A. F., and DAIMON, J. *Mathematical Modelling of Industrial Flames. Review of recent IFRF activities: from model development through validation to industrial applications*. Japanese Flame Days '97, JFRC 20th Anniversary, Senri Life Science Center, Osaka, Japan. 1997.
- [81] BECKMANN, M., GRIEBEL, H., and SCHOLZ, R. *Einfluß von Temperatur, Durchmischung und Verweilzeit auf den Abbau organischer Spurenstoffe bei der thermischen Behandlung von Abfallholz*. DGMK-Fachbereichstagung, En-



ergetische und stoffliche Nutzung von Abfällen und nachwachsenden Rohstoffen - Velen III. 1998.

- [82] BECKMANN, M. and SCHOLZ, R. *Substitution of Primary Fuels by Waste Materials in High Temperature Processes*. Einsatz von industriellen und kommunalen Abfällen im Zementherstellungsprozeß; Opole. 1998.
- [83] BECKMANN, M. and SCHOLZ, R. *Vergasung von Abfällen in Rostsystemen*. Vergasungsverfahren für die Entsorgung von Abfällen. 1998.
- [84] BECKMANN, M., SCHOLZ, R., DAVIDOVI, M., and WEICHERT, C. *Vergasung und Verbrennung von Abfallholz in Rostsystemen*. Restmüllentsorgung (VDI-Bericht 1387). 1998.
- [85] SCHOLZ, R. and BECKMANN, M. *Substitution von Brennstoffen und Rohstoffen durch Abfälle in Hochtemperaturprozessen*. 11. DVV-Kolloquium Stoffliche und thermische Verwertung von Abfällen in industriellen Hochtemperaturprozessen, Braunschweig, Germany. 1998.
- [86] SCHULENBURG, F. and SCHOLZ, R. *Bilanzierung und Bewertung von thermischen Abfallbehandlungsverfahren; Einfluß unterschiedlicher Abfallvorbehandlungsverfahren*. Restmüllentsorgung (VDI-Bericht 1387). 1998.
- [87] WEBER, R. *Application Relevance of Flow, Mixing and Reaction in High Intensity Flames*. Final Colloquium, Collaborative Research Center 167. High Intensity Combustors - Steady Isobaric Combustion, Karlsruhe, Germany. 1998.
- [88] BECKMANN, M., DAVIDOVI?, M., GEHRMANN, H.-J., and SCHOLZ, R. *Prozeßoptimierung der Verbrennung und Vergasung von Abfällen in Rostsystemen*. 19. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 1492), Dresden, Germany. 1999.
- [89] BECKMANN, M. and SCHOLZ, R. *Substitution of Fuels and Raw Materials by Waste in High Temperature Processes*. 2nd International Symposium on Incineration and Flue Gas Treatment Technologies, Sheffield, UK. 1999.
- [90] BECKMANN, M., SCHULENBURG, F., and SCHOLZ, R. *Vergleich verschiedener Konzepte aus mechanisch-biologischen und thermischen Verfahrensschritten zur Abfallbehandlung*. Thermische Abfallbehandlung in dezentralen Anlagen, 2. Fachtagung, Freiberg, Germany. 1999.
- [91] SCHOLZ, R. and BECKMANN, M. *Kriterien zur Substitution von Regelbrennstoffen durch Ersatzbrennstoffe*. 11. Kasseler Abfallforum "Bio- und Restabfallbehandlung", Witzenhausen, Germany. 1999.
- [92] WEBER, R. *Energy Efficient and Environmentally Friendly Technologies for Furnaces and Boilers. Technical Concerns and Expectations Overseas*. Forum on High Performance Industrial Furnaces and Boilers, Science Museum, Tokyo, Japan. 1999.



- [93] WEBER, R., VERLAAN, A. L., ORSINO, S., and LALLEMANT, N. *Flow and Mixing in Gas-Fired Furnaces Operated with Highly Preheated Combustion Air*. 2nd High Temperature Air Combustion (HTAC) Symposium, Taiwan. 1999.
- [94] WEICHERT, C. and SCHOLZ, R. *Einbindung von NO_x-Minderungsmaßnahmen in die Regelung von Feuerungsanlagen der thermischen Abfallbehandlung*. 19. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 1492), Dresden, Germany. 1999.
- [95] BECKMANN, M. and SCHOLZ, R. *Residence time behaviour of solid material at grate systems*. 5th European Conference on Industrial Furnaces and Boilers (INFUB), Porto, Portugal. 2000.
- [96] BECKMANN, M., SCHULENBURG, F., and SCHOLZ, R. *Energy Utilisation of Biomass from the Sugar Industry with Fluidized Bed and Grate Systems*. Fluidization 2000, China-Japan Symposium. 2000.
- [97] DAVIES, M. and SCHOLZ, R. *Development of an Energetic Process Model for the Description of the Melting Behaviour in a Cokeless Natural Gas Fired Cupola Furnace (CLCF)*. Turkish National Conference on Thermal Sciences and Technologies. 2000.
- [98] DAVIES, M., WEICHERT, C., and SCHOLZ, R. *Energetic process model for the description of the melting behaviour in a natural gasfired cokeless cupola furnace (CLCF)*. 5th European Conference on Industrial Furnaces and Boilers (INFUB), Porto, Portugal. 2000.
- [99] HAAS, J., TAKEI, M., ORSINO, S., TAMURA, M., and WEBER, R. *A Novel Mathematical Model for Predicting Combustion Performance of Oil-Fired Glass Melting Furnaces*. Presented at the International Glass Annual Meeting. 2000.
- [100] ORSINO, S., BREUSSIN, F., WEBER, R., PEREZ, E., and MALAUBIER, F. *A Numerical Study of Down-Fired Boilers*. International Conference on Applied Computational Fluid Dynamics ACFD. 2000.
- [101] ORSINO, S. and WEBER, R. *IFRF User Defined Subroutines for Predictions of Pulverized Coal Combustion using the Fluent CFD Code*. International Conference on Applied Computational Fluid Dynamics ACFD. 2000.
- [102] SCHULENBURG, F., GUIRAUD, A., DAVIDOVIC, M., GEHRMANN, H.-J., SCHOLZ, R., and BECKMANN, M. *Energy Utilisation of Biomass from the Sugar Industry*. 5th European Conference on Industrial Furnaces and Boilers (INFUB), Porto, Portugal. 2000.
- [103] WEBER, R., ORSINO, S., VERLAAN, A. L., and LALLEMANT, N. *Combustion of Light and Heavy Fuel Oils in High Temperature Air*. 3rd CREST International Symposium on High Temperature Air Combustion and Gasification. 2000.



- [104] WEBER, R., ORSINO, S., VERLAAN, A. L., and LALLEMANT, N. *Oil Combustion in High Temperature Air*. Symposium of High Temperature Air Combustion & Applications. 2000.
- [105] WEICHERT, C. and SCHOLZ, R. *Integration of Measures for NO_x-Reduction in the Control of Firing Plants for Thermal Waste Treatment*. Turkish National Conference on Thermal Sciences and Technologies. 2000.
- [106] MANCINI, M., WEBER, R., and BOLLETTINI, U. *Development of mathematical model for high temperature air combustion*. Fluent CFD User Group Meeting. 2001.
- [107] MANCINI, M., WEBER, R., and BOLLETTINI, U. *Mathematical Models Development for Design of HTAC Systems*. 4th International Symposium on High Temperature Air Combustion and Gasification, Rome, Italy. 2001.
- [108] SCHOLZ, R., BECKMANN, M., and SCHULENBURG, F. *Abfallwirtschaftliche Maßnahmen und Klimaschutz*. Münsteraner Schriften zur Abfallwirtschaft, Münsteraner Abfallwirtschaftstage. 2001.
- [109] SCHOLZ, R., DAVIES, M., and BALD, T. *Möglichkeiten der Prozessführung bei gasbefeuerter Kupolofen für den Einsatz unterschiedlicher Brennstoffe*. 20. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 1629), Essen, Germany. 2001.
- [110] SCHOLZ, R. and HARNAUT, T. *Dezentrale Energieversorgung durch Kopplung unterschiedlicher regenerativer Energieressourcen*. Internationaler Fachkongress für nachwachsende Rohstoffe (Narossa). 2001.
- [111] TAMURA, M., HAAS, J., WEBER, R., and BOSS, M. *Discrete Fuel Injection - A Novel Technique for Oil-Fired Glass Furnaces*. 13th International IFRF Member Conference - The developing role of the IFRF - Conclusions from Triennial 1998-2000, Noordwijkerhout, Netherlands. IFRF. 2001.
- [112] TAMURA, M., WEBER, R., and KAMP W., van de. *Characterisation of Alternative Fuels for Co-Firing with Pulverized Coal*. 13th International IFRF Member Conference - The developing role of the IFRF - Conclusions from Triennial 1998-2000, Noordwijkerhout, Netherlands. IFRF. 2001.
- [113] WEBER, R. *Combustion of Natural Gas, Oil and Coal with Air Preheated to Temperatures in Excess of 1000 °C*. 13th International IFRF Member Conference - The developing role of the IFRF - Conclusions from Triennial 1998-2000, Noordwijkerhout, Netherlands. IFRF. 2001.
- [114] WEBER, R. *Combustion of Natural Gas with High Temperature Air. Basic Concepts and Applications of the New Technology - European Perspective*. Colloque de la Recherche de Gaz de France. 2001.
- [115] WEBER, R. *Industrial Applications of the New Technology - European Perspective*. Proceedings of the Forum on High Temperature Air Combustion Technology. 2001.

- [116] BECKMANN, M., HORENI, M., and SCHOLZ, R. *Substitution of Fuels and Raw Materials by Waste in High Temperature Processes*. The Future of Waste Management in Europe, Die Zukunft der Abfallwirtschaft in Europa; GVC-Gesellschaft Verfahrenstechnik und Chemieingenieurwesen. 2002.
- [117] KROOS, J., HOWER, K., SPITZER, K.-H., and SCHOLZ, R. *The DSC-Process - An Efficient Technology For Flat Steel Production*. Advances in Production Engineering: Materials, Design, Manufacturing and Industrial Engineering; Proceedings of Sixth International Conference on Production Engineering and Design for Development - PEEDD 6. 2002.
- [118] MANCINI, M. and WEBER, R. *Formation and Destruction of Nitrogen Oxides in Combustion of Natural Gas with High Temperature Air*. 5th International Symposium on High Temperature Air Combustion and Gasification HTACG, Yokohama, Japan. 2002.
- [119] NEUKIRCHEN, B., KNOCH, M., SCHOLZ, R., and WIESNER, J. *GVC / Dechema - Fachausschuß "Abfallbehandlung" - Zukünftige Herausforderungen*. The Future of Waste Management in Europe, Die Zukunft der Abfallwirtschaft in Europa; Plenarvortrag 4; GVC - Gesellschaft "Verfahrenstechnik und Chemieingenieurwesen". 2002.
- [120] RÜPPEL, F., SPITZER, K.-H., SCHOLZ, R., KROOS, J., and HOWER, K. *The DSC process for energy efficient production of light weight steels*. European Conference on Industrial Furnaces and Boilers (INFUB). 2002.
- [121] SCHOLZ, R. and HARNAUT, T. *Energetische Bewertung und Optimierung von Verfahren der thermischen Abfallbehandlung am Beispiel des Klinkerbrennprozesses und des Schrotteinschmelzens*. DVV-Kolloquium "Thermische Verfahren der Abfallbehandlung - Entwicklungen, Optimierung, Bewertung". 2002.
- [122] WEBER, R. *New Combustion Technology for Reheating Furnaces*. Conference "Challenges in Reheating Furnaces". 2002.
- [123] WEBER, R., BRAUCKMANN, D., SCHOLZ, R., MANCINI, M., and KAMP, W. vd. *Numerical simulations of Cement Kiln Flames*. 6th European Conference on Industrial Furnaces and Boilers INFUB, Estoril-Lisboa, Portugal. 2002.
- [124] HARNAUT, T. and SCHOLZ, R. *Substitution of primary fuel by secondary fuel in a cokeless natural gas fired cupola furnace for melting scrap iron*. Canadian Chemical Engineering Conference. 2003.
- [125] LUDEWIG, S. and SCHOLZ, R. *Model Based Process Control with regard to Burnout Optimisation and NO_x-Emissions Minimisation for Incinerators Fired with Fuels of Unknown, Variable Compositions*. Polish Academy of Science, International Symposium on Combustion Processes. 2003.
- [126] LUDEWIG, S. and SCHOLZ, R. *Modellgestützte Prozessführung von Feuerungsanlagen der thermischen Abfallbehandlung zur Optimierung von NO_x-Emissionen für Einsatzstoffe mit unbekannter veränderlicher Zusammensetzung*. 21. Deutscher



Flammentag - Verbrennung und Feuerung (VDI Berichte 1750), Cottbus, Germany. 2003.

- [127] MANCINI, M., SCHWÖPPE, P., and WEBER, R. *Examining NO_x Chemistry in High Temperature Air Combustion Process*. Proceedings of XVIII International Symposium on Combustion Processes. 2003.
- [128] ROGASIK, J., ROSYADI, I., FLECKENSTEIN, J., HANEKLAUS, S., SCHNUG, E., FAN, X., and SCHOLZ, R. *Phosphorpotentiale von Tiermehl und Schlachtabfällen sowie Möglichkeiten des Phosphorrecyclings*. 'Rückgewinnung von Phosphor in der Landwirtschaft und aus Abwasser und Abfall', Bundesforschungsanstalt für Landwirtschaft (FAL). 2003.
- [129] RÜPPEL, F., SPITZER, K.-H., SCHOLZ, R., KROOS, J., and FLAXA, V. *Potentials of the Direct Strip Casting (DSC) process with regard to new materials and efficient energy use*. Federation of European Materials Societies, European Congress on Advanced Materials and Processes (Euromat). 2003.
- [130] SCHOLZ, R. and RÜPPEL, F. *CO₂ emission reduction by municipal waste incineration*. Internationaler Ausstellungskongreß für Chemische Technik, Umweltschutz und (ACHEMA) Biotechnologie. 2003.
- [131] HEKKENS, R. and MANCINI, M. *CFD modeling for high efficiency combustion*. 14th International IFRF Members' Conference - A Sustainable Energy Supply for Industry - A Challenge for the IFRF, Noordwijkerhout, Netherlands. 2004.
- [132] MUSTER, M., SCHOLZ, R., BOSSE, P., and HEIDERMANN, T. *Entwicklung einer Dauerbrandsicherung für Wasserstoff welche den Testanforderungen der neuen EN 12874 genügt (EFRE 2002.109)*. Ergebnisse und Perspektiven der Strukturfondsförderung, Niedersächsisches Ministerium für Wissenschaft und Kultur. 2004.
- [133] BECKMANN, M., HORENI, M., and SCHOLZ, R. *Energetische Bewertung zur Optimierung von Müllheizkraftwerken*. 37. Kraftwerkstechnisches Kolloquium - Heizkraftwerke und dezentrale Energieerzeugung, Dresden, Germany. 2005.
- [134] MAYER, C., KERSCHBAUMER, W., MANCINI, M., and WEBER, R. *Experimental and numerical investigation of a heating and ignition process of pulverized coal*. FLUENT CFD Forum. 2005.
- [135] REDEKER, C., KROOS, J., SPITZER, K.-H., and SCHOLZ, R. *CO₂ - Mitigation and Enhanced Steel Scrap Recycling with New Direct Strip Casting Process*. International Conference on Clean Technologies in the Steel Industry, Balatonfüred, Hungary. 2005.
- [136] SCHAFFEL, N., SZLEK, A., LOEFFLER, K., MANCINI, M., and WEBER, R. *HTAC Application for Solid Fuel Combustion*. XIX International Symposium on Combustion Processes, Wisla, Poland. 2005.
- [137] SCHAFFEL, N., SZLEK, A., WILK, R., LOEFFLER, K., MANCINI, M., and WEBER, R. *Mathematical Modelling of MILD/Flameless Combustion of Pulver-*

ized Coal. 6th International Symposium on High Temperature Air Combustion and Gasification, Essen, Germany. 2005.

- [138] SZLEK, A., WILK, R., LÖFFLER, K., MANCINI, M., and WEBER, R. *HTAC Application for Solid Fuel Combustion*. 6th International Symposium on High Temperature Air Combustion and Gasification, Essen, Germany. 2005.
- [139] SZLEK, A., WILK, R., and WEBER, R. *High Temperature Air Combustion Technology in Power Cycles*. 18th International Conference on Efficiency, Cost, Optimization, Simulation and Environmental Import of Energy Systems (ECOS), Trondheim, Norway. 2005.
- [140] WEBER, R. *Charakterisierung von Ersatzbrennstoffen. Characterisation of Alternative Fuels*. Berliner Abfallwirtschaftskonferenz, Berlin, Germany. 2005.
- [141] WEBER, R. *Heat Transfer Enhancement and NO_x Emissions Reduction in the MILD Combustion of Gaseous, Liquid and Solid Fuels*. Kolloquium 6 "Innovation bei Thermoprozessen". 2005.
- [142] WEBER, R., SZLEK, A., and WILK, R. *A Novel Application of Mild Combustion Technology to Gas Turbines that Results in Substantial Increase of Cycle Efficiency*. 6th International Symposium on High Temperature Air Combustion and Gasification, Essen, Germany. 2005.
- [143] KUPKA, T., CIESLIK, M., and WEBER, R. *Investigations on ash deposit formation rate during co-combustion of coal with sewage sludge*. 7th International Conference on Industrial Furnaces and Boilers, Porto, Portugal. 2006.
- [144] KUPKA, T., MANCINI, M., IRMER, M., and WEBER, R. *Investigation of Ash Deposit Formation during Co-Firing of Coal with Sewage Sludge, Saw Dust and Refuse Derived Fuel*. 10th International Conference on Boiler Technology. 2006.
- [145] KUPKA, T., MANCINI, M., and WEBER, R. *A CFD analysis of ash particle flow around pipes including particle impaction efficiency calculation*. 6th International Conference on Industrial Furnaces and Boilers, Porto, Portugal. 2006.
- [146] SCHAFFEL, N. and SZLEK, A. *Preliminary investigations of HTAC boiler fired with pulverized coal*. 10th International Conference on Boiler Technology, Szczyrk, Poland. 2006.
- [147] SCHAFFEL, N. and SZLEK, A. *Preliminary studies of HTAC technology applications in boiler*. 31st International Symposium on Combustion, Heidelberg, Germany. 2006.
- [148] SCHWÖPPE, P., SCHOLZ, R., and WEBER, R. *A reactor network approach for modelling MILD-combustion*. Xian international conference on architecture and technology (XICAT), Xian, China. 2006.
- [149] VISCOROVA, R., SCHOLZ, R., SPITZER, K.-H., and WENDELSTORF, J. *Measurements of spray water cooling heat transfer coefficients under oxide scale*

formation conditions. AISTech 2006 Iron & Steel Technology Conference. 2006.

- [150] KUPKA, T., MANCINI, M., and WEBER, R. *Experiments Supported by CFD Simulations for the Evaluation of Ash Deposit Formation during Co-Firing of Coal with Alternative Fuels.* 23. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 1988), Berlin, Germany. 2007.
- [151] KUPKA, T., ZAJĄC, K., MANCINI, M., and WEBER, R. *A CFD Analysis of ash particle flow around pipes including particle impaction efficiency calculations.* 20th ECOS Conference, Padova, Italy. 2007.
- [152] KUPKA, T., ZAJĄC, K., MANCINI, M., and WEBER, R. *A laboratory method supported by simple CFD analysis for the evaluation of ash deposit formation during co-firing of coal with biomass-, bio-waste- and waste materials.* 15th Members' Conference - Combustion in an efficient and environmentally acceptable manner, Pisa, Italy. 2007.
- [153] LUDEWIG, S. and SCHOLZ, R. *Model based optimisation of NO_x-emissions in grate stoker furnaces fired with fuels of unknown, variable composition.* Annual International Conference on Incineration and Thermal Treatment Technologies. 2007.
- [154] LUDEWIG, S. and SCHOLZ, R. *Modellgestützte Optimierung von NO_x-Emissionen in Rostfeuerungen.* 39. Kraftwerkstechnisches Kolloquium - Verfahren und Anlagen der Hochtemperatur-Energietechnik: Stand und Entwicklungsperspektiven. 2007.
- [155] MANCINI, M., SCHWÖPPE, P., and WEBER, R. *Influence of the Mixing on NO_x Emissions in the MILD Combustion of Natural Gas.* 20th International Conference on Efficiency, Costs, Optimization, Simulation and Environmental Impact of Energy Systems (ECOS), Padova, Italy. 2007.
- [156] MANCINI, M., SCHWÖPPE, P., and WEBER, R. *Investigations on the modeling assumptions for NO_x emissions calculations in the MILD combustion of Natural Gas.* 15th Members' Conference - Combustion in an efficient and environmentally acceptable manner, Pisa, Italy. 2007.
- [157] MANCINI, M., SCHWÖPPE, P., and WEBER, R. *Numerical Computation of NO_x Formation in MILD Combustion of Natural Gas.* II ECCOMAS Thematic Conference on Computational Combustion, Delft, Netherlands. 2007.
- [158] MANCINI, M., SCHWÖPPE, P., and WEBER, R. *Predictions of NO_x Formation in MILD/Flameless Combustion.* 23. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 1988), Berlin, Germany. 2007.
- [159] MANCINI, M., WEBER, R., SCHAFFEL, N., and SZLEK, A. *Analysis of numerical modeling in predicting chemistry and NO_x in MILD combustion.* XX International Symposium on Combustion Processes, Pultusk, Poland. 2007.
- [160] MANCINI, M., WECHEL, G., BIALECKI, R., and WEBER, R. *Advances in Boundary Element Method Used to Predict Radiative Heat Transfer in Flames.*



II ECCOMAS Thematic Conference on Computational Combustion, Delft, Netherlands. 2007.

- [161] OSTROWSKI, Z., BIALECKI, R. A., FIC, A., MUSTER, M., and WEBER, R. *POD-RBF Network Approximation for Inverse Problem Solutions*. Proceedings of Inverse Problems, Design and Optimization Symposium (IPDO-2007), Miami, USA. 2007.
- [162] OSTROWSKI, Z., BIALECKI, R. A., FIC, A., WEBER, R., and MUSTER, M. *Zastosowanie aproksymacji POD-RBF do rozwiązywania zadan odwrotnych (POD-RBF approximation applied to the solution of inverse problems)*. XIII Symposium on Heat and Mass Transfer, Darlowek, Poland. 2007.
- [163] SCHAFFEL, N., SZLEK, A., MANCINI, M., and WEBER, R. *Analysis of High Temperature Air Combustion (HTAC) boiler for efficient and clean power production using Computational Fluid Dynamics*. 20th ECOS Conference, Padova, Italy. 2007.
- [164] SCHAFFEL, N., SZLEK, A., MANCINI, M., and WEBER, R. *Application of HTAC technology in supercritical pulverized coal boiler*. XX International Symposium on Combustion Processes, Pultusk, Poland. 2007.
- [165] SCHAFFEL, N., SZLEK, A., MANCINI, M., and WEBER, R. *Design of the HTAC Boiler Fired with Pulverized Coal Using Numerical Modeling Methods*. II ECCOMAS Thematic Conference on Computational Combustion, Delft, Netherlands. 2007.
- [166] SCHAFFEL, N., SZLEK, A., MANCINI, M., and WEBER, R. *Numerical Investigation of the Configuration of a Pulverized Coal Fired Boiler Operated with HTAC Technology*. 23. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 1988), Berlin, Germany. 2007.
- [167] SCHOLZ, R. *Integration of Thermal Waste Treatment in High-Temperature-Processes; Thermal Waste Treatment as an Example for a High-Temperature-Process*. Deutsch-Syrische Umweltwoche 2007: Nachhaltige Energie- und Umweltsysteme. 2007.
- [168] SCHOLZ, R. *Secondary fuels in industrial processes for substitution of fossil fuels; energetic evaluation of concepts*. Deutsch-Syrische Umweltwoche 2007: Nachhaltige Energie- und Umweltsysteme. 2007.
- [169] SCHOLZ, R. *Systematic evaluation of energy conversion in the field of thermal waste treatment; What is energy efficiency?* Deutsch-Syrische Umweltwoche 2007: Nachhaltige Energie- und Umweltsysteme. 2007.
- [170] SCHOLZ, R. *Waste Incineration Systems, Current Technology and Future Developments*. Deutsch-Syrische Umweltwoche 2007: Nachhaltige Energie- und Umweltsysteme. 2007.
- [171] SEIFERT, H., BECKMANN, M., WEBER, R., and SCHOLZ, R. *Waste to Energy, Ersatzbrennstoffe für den Kraftwerkeinsatz*. ProcessNet Jahrestagung 2007. 2007.



- [172] WECEL, G., BIALECKI, R. A., and MANCINI, M. *BEM employing Cartesian hierarchical meshes*. 5th International Symposium on Radiative Transfer, Bodrum, Turkey. 2007.
- [173] WECEL, G., BIALECKI, R. A., MANCINI, M., and WEBER, R. *Radiative Heat Transfer in Industrial Furnaces*. Fortschrittsberichte der Deutschen Keramischen Gesellschaft, Verfahrenstechnik, Thermische Verfahrenstechnik. 1. 2007.
- [174] WORBERG, R., KIM, R., SCHUMACHER, R., HERMANN, SCHOLZ, WEBER, and MANCINI. *Wärmetechnik des Heat-Recovery-Ofens*. Fachtagung Kokereitechnik. 2007.
- [175] KLEMM, M., BECKMANN, M., and SCHOLZ, R. *Energetische Bewertung der Substitution von fossilen Brennstoffen durch Ersatzbrennstoffe und Biomasse*. 40. Kraftwerkstechnisches Kolloquium - Künftiges Brennstoff- und Technologieportfolio in der Kraftwerkstechnik. Technische Universität Dresden. 2008.
- [176] KUPKA, T., ZAJĄC, K., and WEBER, R. *Effect of Fuel Type and Deposition Surface Temperature on the Growth and Structure of Ash Deposit Collected during Co-firing of Coal with Sewage Sludge and Saw Dust*. 22th Impacts of Fuel Quality on Power Production and Environment, Banff, Canada. 2008.
- [177] KUPKA, T., ZAJĄC, K., and WEBER, R. *Effect of fuel type and deposition surface temperature on the growth and structure of ash deposit collected during co-firing of coal with sewage-sludge and saw dust*. 40. Kraftwerkstechnisches Kolloquium, Dresden, Germany. 2008.
- [178] KUPKA, T., ZAJĄC, K., and WEBER, R. *Influence of Fuel Type and Deposition Surface Temperature on the Growth and Chemical and Physical Structure of Ash Deposit Sampled during Co-firing of Coal with Sewage Sludge and Saw Dust*. 8th European Conference on Industrial Furnaces and Boilers INFUB, Vilamoura, Portugal. 2008.
- [179] MANCINI, M., WEBER, R., SCHAFFEL, N., and SZLEK, A. *CFD Method and Detailed Mechanisms Modelling in Predicting NO_x in MILD Combustion*. 7th International Symposium on High Temperature Air Combustion and Gasification, Phuket, Thailand. 2008.
- [180] SCHAFFEL, N. and SZLEK, A. *Analysis of isothermal gas turbine coupled with the steam cycle*. 21th ECOS Conference, Krakau, Poland. 2008.
- [181] SCHAFFEL, N., SZLEK, A., MANCINI, M., and WEBER, R. *Application of HTAC technology in power boilers fired with pulverized coal*. 7th International Symposium on High Temperature Air Combustion and Gasification, Phuket, Thailand. 2008.
- [182] SCHAFFEL, N., SZLEK, A., MANCINI, M., and WEBER, R. *Simulations of the steam power cycle with High Temperature Air Combustion (HTAC) boiler*. 21th ECOS Conference, Krakau, Poland. 2008.



- [183] SCHAFFEL, N., WERLE, S., SZLEK, A., WILK, R., and HUSTAD, J. E. *Experimental investigation of partially premixed flames*. 21th ECOS Conference, Krakau, Poland. 2008.
- [184] SCHOLZ, R. and GOSE, S. *Substitution von Regelbrennstoffen durch Ersatzbrennstoffe*. Deutsch-Syrische Umweltwoche 2008: Nachhaltige Energie- und Umweltsysteme. Universität Damaskus. 2008.
- [185] SCHWÖPPE, P. and SCHOLZ, R. *Experimental and theoretical investigations on passive flame arrestors*. 8th European Conference on Industrial Furnaces and Boilers INFUB, Porto, Portugal. 2008.
- [186] WEBER, R. *Recent Developments in Flameless Combustion Technology*. 8th European Conference on Industrial Furnaces and Boilers INFUB, Vilamoura, Portugal. 2008.
- [187] HEYMANN, C., RICHARDSON, A., and MANCINI, M. *The Impact of Turbulence- and Chemistry-Turbulence Interaction Models in the Simulation of OXY-Fuel*. 10th Conference on Energy for a Clean Environment (Clean Air), Lissabon, Portugal. 2009.
- [188] SCHAFFEL-MANCINI, N., MANCINI, M., SZLEK, A., and WEBER, R. *Ecological evaluation of the pulverized coal combustion in HTAC technology*. International Conference on Optimization using Exergy-Based Methods and Computational Fluid Dynamics, Berlin, Germany. 2009.
- [189] SCHAFFEL, N., SZLEK, A., MANCINI, M., and WEBER, R. *Application of HTAC technology to pulverized coal boilers*. 10th Conference on Energy for a Clean Environment (Clean Air), Lissabon, Portugal. 2009.
- [190] WEBER, R., KUPKA, T., and ZAJĄC, K. *Combustion of Refuse Derived Fuel in the laboratory scale jet flames*. 10th Conference on Energy for a Clean Environment (Clean Air), Lissabon, Portugal. 2009.
- [191] WROBEL, J. U., MANCINI, M., WEBER, R., and LÖFFLER, R. *An Advanced Model of Pulverized Coal Combustion for CFD Simulations*. International Conference on Optimization using Exergy-Based Methods and Computational Fluid Dynamics, Berlin, Germany. 2009.
- [192] ZAJĄC, K., KUPKA, T., BRINKER, S., and WEBER, R. *Advanced Solid Fuel Characterisation*. International Conference on Optimizing using Exergy Based Methods and Computational Fluid Dynamics, Berlin, Germany. 2009.
- [193] MANCINI, M. and WEBER, R. *NO_x modeling in HTAC Combustion*. 8th International Symposium on High Temperature Air Combustion and Gasification, Poznan, Poland. 2010.
- [194] OSTROWSKI, Z., BIALECKI, R., KASSAB, A., MUSTER, M., and WEBER, R. *Inverse POD-RBF solution for time and spatial distribution of film coefficient for ball immersed in cooling water*. 4th European Conference on Computational Mechanics (Solids, Structures and Coupled Problems in Engineering), ECCOMAS ECCM 2010 Paris, France. 1213. 2010.



- [195] SCHAFFEL-MANCINI, N., MANCINI, M., SZLEK, A., and R.WEBER. *Novel Concept for Supercritical Boilers*. 11th International Conference on Boiler Technology, Szczyrk, Poland. 2010.
- [196] SCHAFFEL-MANCINI, N., MANCINI, M., and WEBER, R. *Turbulence-chemistry interaction in mild and FLOX combustion*. 6th International Symposium on High Temperature Air Combustion and Gasification, Poznan, Poland. 2010.
- [197] WEBER, R., MANCINI, M., SCHAFFEL-MANCINI, N., and KUPKA, T. *Mathematical Modelling of Ash Deposition in a Coal-Fired Experimental Furnace*. 23th Impacts of Fuel Quality on Power Production and Environment, Lapland, Finland. 2010.
- [198] WEBER, R., MANCINI, M., SCHAFFEL-MANCINI, N., and KUPKA, T. *Mathematical Modelling of Ash Deposition*. XXI International Symposium on Combustion Processes, Miedzyszdroje, Poland. 2010.
- [199] BUCZYNSKI, R. *Investigation of Fixed-Bed Combustion Process in Small Scale Boilers*. PhD thesis. Silesian University of Technology, Faculty of Environmental Engineering, Energy & Clausthal University of Technology, Faculty of Energy, and Management, 2011.
- [200] JAKOBS, T., FLECK, S., MANCINI, M., WEBER, R., and KOLB, T. *Gasification of High Viscous Slurry - R&D on Atomization and Numerical Simulation*. 36th International Technical Conference on Clean Coal and Fuel Systems, Clearwater, USA. 2011.
- [201] KUPKA, T., WEBER, R., ZAJĄC, K., and SCHOPF, N. *Combustion behaviour of alternative fuels in small-scale pulverised-fuel flames*. 11th International Conference on Energy for a Clean Environment (Clean Air), Lissabon, Portugal. 2011.
- [202] MANCINI, M., BUCZYNSKI, R., WEBER, R., FLECK, S., STOESSER, P., and KOLB, T. *Gasification of Glycol: Measurements and Mathematical Modelling*. 25. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 2119), Karlsruhe, Germany. 2011.
- [203] OSTROWSKI, Z., BIALECKI, R., MUSTER, M., and WEBER, R. *Reconstruction of Heat Transfer Coefficient at Nucleate and Film Boiling using Proper Orthogonal Decomposition*. 7th International Conference on Inverse Problems in Engineering, Orlando, USA. 2011.
- [204] WEBER, R., MANCINI, M., SCHAFFEL-MANCINI, N., and KUPKA, T. *Mathematical Modelling of Ash Deposition in a Coal-Fired Experimental Reactor*. 9th European Conference on Industrial Furnances and Boilers, Estoril, Portugal. 2011.
- [205] BECKMANN, A. M., MANCINI, M., and WEBER, R. *CFD-Based Modelling of the Ash Behaviour in a Pulverized Coal Flame*. 44. Kraftwerkstechnisches Kolloquium, Dresden, Germany. 2012.

- [206] BECKMANN, A. M., MANCINI, M., and WEBER, R. *CFD Modelling of a pulverized coal flame with emphasis on predicting the ash deposition behaviour*. 24th Impacts of Fuel Quality on Power Production and Environment, Puchberg, Austria. 2012.
- [207] BECKMANN, M., PIEPER, C., SCHOLZ, R., and MUSTER, M. *Perspektiven für eine Vollversorgung mit erneuerbaren Energien*. 44. Kraftwerkstechnisches Kolloquium, Dresden, Germany. 2012.
- [208] BERNHARDT, D., LYCZKOWSKA, A., GEHRMANN, H.-J., SEUFERT, T., and VODEGEL, S. *Prozessorientierte Biomassebewertung*. 44. Kraftwerkstechnisches Kolloquium, Dresden, Germany. 2012.
- [209] KOKO, M., WILL, T., WEBER, R., and BECKMANN, A. M. *A 1-D Simulation Tool for Biomass Co-Firing Development and Application*. 2nd IEA Clean Coal Centre Workshop on Cofiring Biomass with Coal, Kopenhagen, Denmark. 2012.
- [210] MUSIOL, A., MANCINI, M., and WEBER, R. *Numerical Simulation of coal and biomass flame in a small scale combustion chamber*. 17th IFRF Members Conference, Chateau de Maffhers, France. 2012.
- [211] WEBER, R. *CFD applications in industrial combustion*. 17th IFRF Members Conference, Chateau de Maffhers, France. 2012.
- [212] WEBER, R., MANCINI, M., SCHAFFEL-MANCINI, N., and KUPKA, T. *On Importance of Fluid Dynamics in CFD Predictions of Ash Deposits*. 24th Impacts of Fuel Quality on Power Production and Environment, Puchberg, Austria. 2012.
- [213] BECKMANN, A. M., MANCINI, M., and WEBER, R. *CFD-Modellierung einer Kohlenstaubflamme mit dem Fokus auf der Vorhersage der Ascheablagerung*. 26. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 2161), Duisburg, Germany. 2013.
- [214] MANCINI, M., WEBER, R., WEIGAND, P., LEUCKEL, W., and KOLB, T. *Design of the entrained flow reactor for gasification of biomass based slurry*. 26. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 2161), Duisburg, Germany. 2013.
- [215] PAULO, S., STECKLINA, G., and WEBER, R. *Verschlackungsuntersuchung mittels Online-Daten - Beispieluntersuchung am Braunkohle gefeuerten Kraftwerk Jänschwalde*. 45. Kraftwerkstechnisches Kolloquium, Dresden, Germany. 2013.
- [216] PAULO, S., STECKLINA, G., and WEBER, R. *Verschlackungsuntersuchung mittels Online-Daten - Beispieluntersuchung am Braunkohle gefeuerten Kraftwerk Jänschwalde*. 26. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 2161), Duisburg, Germany. 2013.
- [217] VODEGEL, S., BERNHARDT, D., GEHRMANN, H.-J., and WEBER, R. *Prozessorientierte Bewertung verschiedener Biomassen*. 26. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 2161), Duisburg, Germany. 2013.

- [218] WEBER, R. and MANCINI, M. *Heterogene Kinetik der Koksverbrennung*. 45. Kraftwerkstechnisches Kolloquium, Dresden, Germany. 2013.
- [219] BECKMANN, A. M., MANCINI, M., and WEBER, R. *Coal Ash Particle Deposition Modeling: A Closer Look at Various CFD sub-models*. 25th Impacts of Fuel Quality on Power Production and Environment, Snowbird, USA. 2014.
- [220] BECKMANN, A. M., MANCINI, M., and WEBER, R. *Investigating Ash Deposition using Down-Fired Combustion Rig*. 12th International Conference on Boiler Technology, Szczyrk, Poland. 2014.
- [221] BRINKER, S. and WEBER, R. *Co-Combustion of Coal and Biomass in O₂/CO₂-atmosphere*. 25th Impacts of Fuel Quality on Power Production and Environment, Snowbird, USA. 2014.
- [222] BRINKER, S. and WEBER, R. *Mitverbrennung von Biomasse und Kohle in O₂/CO₂-Atmosphäre*. 46. Kraftwerkstechnisches Kolloquium, Dresden, Germany. 2014.
- [223] ALBERTI, M., WEBER, R., MANCINI, M., FATEEV, A., and CLAUSEN, S. *On the accuracy of HITEMP-2010 calculated emissivities of Water Vapor and Carbon Dioxide*. 10th International Conference on Industrial Furnaces and Boilers, Porto, Portugal. 2015.
- [224] ALBERTI, M., WEBER, R., MANCINI, M., FATEEV, A., and CLAUSEN, S. *On the accuracy of HITEMP-2010 calculated emissivities of Water Vapor and Carbon Dioxide*. 12th International Conference on Energy for a Clean Environment, Lisboa, Portugal. 2015.
- [225] ALBERTI, M., WEBER, R., and MANCINI, M. *Bestimmung der Emissionskoeffizienten von Gas-Gemischen auf Grundlage von spektroskopischen Datenbanken*. 27. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 2267), Clausthal, Germany. 2015.
- [226] ALBERTI, M., WEBER, R., and MANCINI, M. *Calculation of Gas Emissivities at High Temperatures and High Pressures using HITEMP-2010*. XXII International Symposium on Combustion Processes, Gliwice, Poland. 2015.
- [227] BECKMANN, A. M., MANCINI, M., and WEBER, R. *CFD-Modellierung einer Kohlenstaubflamme unter besonderer Berücksichtigung der Vorhersage von Ascheablagerungen*. 27. Deutscher Flammentag - Verbrennung und Feuerung (VDI Berichte 2267), Clausthal, Germany. 2015.
- [228] ALBERTI, M., WEBER, R., and MANCINI, M. *Radiative Heat Transfer in a High Pressure Entrained Flow Gasifier*. 1st International Workshop on Oxy-Fuel Combustion, Montabaur, Germany. 2016.
- [229] BECKMANN, A. M., MANCINI, M., and WEBER, R. *Towards understanding of deposit build-up mechanisms in our experimental facility: Experiments and CFD modeling of 15kW coal flames*. 26th Impacts of Fuel Quality on Power Production and Environment, Prague, Czech Republic. 2016.