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Brief Biography:

1964	born in Maaria (Turku), Finland
1989	Master's degree. Department of Chemical Engineering, Helsinki University of Technology, Finland
1997	Doctor of Science (Technology), Department of Chemical Engineering Helsinki University of Technology, Finland

Professional Career:

1989–2000	Catalysis Research, Neste Oil Refining (prof. leave 1999-2000), Finland
1999–2000	Post Doc position in Helsinki University of Technology, Laboratory of Chemical Engineering and Plant Design, Finland
2001 →	Post doc, after 2003 permanent position as Head of chemical/biological production systems team and laboratory manager, Process Systems Engineering, Max-Planck-Institute of Dynamics for Complex Technical Systems, Germany
2009 →	Adjunct lecturer in Otto-von-Guericke-University Magdeburg, Faculty of Process and Systems Engineering, Germany

Research Interest: Catalysis, Reaction Engineering and Modelling of Chemical and Energy Conversion Systems, CO_2 Utilisation and Recycle, Biomass Conversion to Fuels and Electricity, Chemical and Fuel Production with Photosynthetic Organisms, Sustainability (LCA), Process Systems Engineering

Teaching: M.Sc. Course: Biofuels: Sustainable Production and Utilization, Otto-von-Guericke University Magdeburg

Evaluator activities: for European Commission and national organisations since 2003

Publications:

Book contributions (selection)

Rihko-Struckmann, L., Karinen, R., Catalysis in Etherification Processes, in Catalysis in Finland – An exciting Pathway, Salmi, T., Mäki-Arvela, P. (Ed.), pp. 320-326, Suomen Katalyysiseura, ISBN:978-952-93-3085-0, Helsinki, 2013.

Rihko-Struckmann, L. K., Munder, B. Chalakov, L. and Sundmacher, K., Solid Electrolyte Membrane Reactors, Chapter 7: Solid Electrolyte Membrane Reactors, in *Membrane Reactors*, Seidel-Morgenstern (Ed.), pp. 193-233, Wiley-VCH Verlag GmBH &Co. KGaA, Weinheim, 2010.

Hertel, C., Heidebrecht, P., **Rihko-Struckmann, L.** and Sundmacher K. "Hydrogen Production from Reformate Gas by a Cyclic Water Gas Shift Reactor" in 18th World Hydrogen Energy Conference 2010 - *WHEC 2010: May 16.-21. 2010 Book 3: Hydrogen Production Technologies* - Part 2 / D. Stolten, T. Grube (Ed.), Essen, 2010.

Kolah, A., **Rihko-Struckmann, L.**, and Sundmacher, K., Catalytic Distillation Technology Applied to Ether Production, in *Handbook of Methyl Tertiary Butyl Ether*, Hamid, A. (Ed.), Marcel-Dekker, 2004.

Lappi, M. and **Rihko, L.**, Unregulated Exhaust Emissions from Engine Vehicles, VTT Research Notes 1748, VTT, Espoo,1996.

Publications in journals (with peer-review)

1. El-Sibai, A., Rihko-Struckmann, L.K. and Sundmacher, K., Model-based Optimal Sabatier Reactor Design for Power-to-Gas Applications, Energy Technol. (Weinheim, Ger.) 2017 (accepted), DOI: 10.1002/ente.201600600

2. Rihko-Struckmann, L. K., Molnar M., Pirwitz, K., Fachet,M., McBride, K., Zinser, A. and Sundmacher, K., Recovery and separation of carbohydrate derivatives from the lipid extracted alga Dunaliella by mild liquefaction, ACS Sustainable Chem. Eng. 5 (2017) 588-595.

3. Wenzel, M., Dharanipragada, N.V.R. A., Galvita, V. V., Poelman,H., Marin, G. B., Rihko-Struckmann,L., Sundmacher, K., CO production from CO2 via reverse water-gas shift reaction performed in a chemical looping mode: Kinetics on modified iron oxide, J. CO2 Util. 17 (2017) 60-68.

4. Pirwitz, K., Rihko-Struckmann, L., Sundmacher, K.,Valorization of the aqueous phase obtained from hydrothermally treated Dunaliella salina remnant biomass, Bioresour. Technol. 219 (2016) 64-71.

5. Wenzel,M., Rihko-Struckmann, L., Sundmacher, K., Thermodynamic Analysis and Optimization of RWGS Processes for Solar Syngas Production from CO2, 2016, AIChE J. 63 (2017) 15–22.

6. Zinser, A., Rihko-Struckmann, L. and Sundmacher, K., Dynamic Method for Computation of Chemical and Phase Equilibria, Comput. Chem. Eng. 89 (2016) 1-10.

7. Fachet, M., Hermsdorf, D., Rihko-Struckmann, L. and Sundmacher, K., Flow cytometry enables dynamic tracking of algal stress response: A case study using carotenogenesis in Dunaliella salina, Algal Res. 13 (2016) 227-234.

8. Rihko-Struckmann, L.K., Datta, P., Wenzel, M., Sundmacher, K., Dharanipragada, N. V. R. A., Poelman, H., Galvita and V., Marin, G.B. Hydrogen and Carbon Monoxide Production by Chemical Looping over Iron-Aluminium Oxides, Energy Technol. (Weinheim, Ger.) 4 (2016) 304-313.

9. El Sibai A., Rihko-Struckmann, L. and Sundmacher, K., Synthetic Methane from CO2: Dynamic Optimization of the Sabatier Process for Power-to-Gas Applications Comput. Aided Chem. Eng. 37 (2015) 1157-1162.

10. Flassig, R. J. Fachet, M., Rihko-Struckmann, L. and Sundmacher, K., Robust process design for the bioproduction of β-carotene in green microalgae, Comput. Aided Chem. Eng. 37 (2015) 2117-2122

11. Zinser, A., Ye, K., Rihko-Struckmann, L. and Sundmacher, K, A dynamic method for computing thermodynamic equilibria in process simulation, Comput. Aided Chem. Eng. 37 (2015) 299-304.

12. Pirwitz, K., Flassig, R. J., Rihko-Struckmann, L. and Sundmacher, K., Energy and operating cost assessment of competing harvesting methods for D. salina in a □-carotene production process, Algal Res. 12 (2015) 161-169.

13. Pirwitz, K., Rihko-Struckmann, L. and Sundmacher, K., Comparison of flocculation methods for harvesting Dunaliella, Bioresource Technol. 196 (2015) 145-152.

14. Flassig, R. J., Migal, I., van der Zalm, E., Rihko-Struckmann, L., and Sundmacher, K., Rational selection of experimental readout and intervention sites for reducing uncertainties in computational model predictions, BMC Bioinformatics 16 (2015) No 13.

15. Sharma, D. K., Gautam, K., Jueppner, J., Giavalisco, P. Rihko-Struckmann, L. Pareek, A. and Sundmacher, K., UPLC-MS analysis of Chlamydomonas reinhardtii and Scenedesmus obliquus lipid extracts and their possible metabolic roles, J. Appl. Phycol. 27 (2015) 1149-1159.

16. Fachet, M., Flassig, R., Rihko-Struckmann, L. and Sundmacher, K., A growth model of Dunaliella salina: Parameter identification and profile likelihood analysis, Bioresour. Technol. 173 (2014) 21-31.

17. Datta,P., Rihko-Struckmann, L. and Sundmacher K. Quantification of produced hydrogen in a cyclic water gas shift process with Mo stabilized iron oxide, Fuel Process.Technol. 128 (2014) 36-42.

18. Zinser, A., Rihko-Struckmann, L. and Sundmacher, K. Storage of Renewable Energies via Chemical Conversion using CO2: Energy Systems Analysis, Comput. Aided Chem. Eng. 31 (2012) 995-999.

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