

# CURRICULUM VITAE

## Dr. Jesper T.N. Knijnenburg

### Personal data

Email: jespth@kku.ac.th  
Nationality: Dutch  
Languages: Dutch (native), English (business fluent), German (advanced),  
Thai (intermediate)

### Education

2016 **Doctor of Sciences**  
ETH Zurich, Switzerland  
Laboratory of Human Nutrition

2008 **Master of Science (Chemical Engineering)**  
TU Delft, the Netherlands  
Particle Technology

2007 **Bachelor of Science (Chemical and Biochemical Engineering)**  
TU Delft, the Netherlands  
Process Equipment

### Work and research experience

2017 – Present **Lecturer**  
Khon Kaen University International College, Thailand  
Biodiversity and Environmental Management curriculum

2016 – 2017 **Postdoctoral researcher**  
National Nanotechnology Center, Thailand  
Hybrid Nanostructure and Nanocomposites Laboratory

2014 – 2015 **Visiting researcher**  
North-West University, Potchefstroom, South Africa  
Preclinical Drug Development Platform

2009 – 2014 **Visiting researcher**  
ETH Zurich, Switzerland  
Particle Technology Laboratory

2008 **Visiting researcher**  
Otto von Guericke University, Magdeburg, Germany  
Department of Mechanical Engineering

2007 **Industrial internship**  
Lhoist Recherche et Développement, Nivelles, Belgium

## Peer-reviewed publications

1. Lorwanishpaisarn, N., Kasemsiri, P., Jetsrisuparb, K., Knijnenburg, J.T.N., Hiziroglu, S., Pongsa, U., Chindaprasirt, P., and Uyama, H., "Dual-responsive shape memory and self-healing ability of a novel copolymer from epoxy/cashew nut shell liquid and polycaprolactone," *Polymer Testing* (2019), in press. DOI: 10.1016/j.polymertesting.2019.106159
2. Knijnenburg, J.T.N., Laohasurayotin, K., Khemthong, P., Kangwansupamonkon, W., "Structure, dissolution, and plant uptake of ferrous/zinc phosphates," *Chemosphere* 223 (2019), 310-318. DOI: 10.1016/j.chemosphere.2019.02.024
3. Lorwanishpaisarn, N., Kasemsiri, P., Srikhao, N., Jetsrisuparb, K., Knijnenburg, J.T.N., Hiziroglu, S., Pongsa, U., and Chindaprasirt, P., "Fabrication of durable superhydrophobic epoxy/cashew nut shell liquid containing flower-like zinc oxide for continuous oil/water separation," *Surface and Coatings Technology* 366 (2019), 106-113. DOI: 10.1016/j.surfcoat.2019.03.021
4. Supanchaiyamat, N., Jetsrisuparb, K., Knijnenburg, J.T.N., Tsang, D.C.W, and Hunt, A.J., "Lignin-based materials for adsorption: current trend, perspectives and opportunities," *Bioresource Technology* 272 (2019), 570-581. DOI: 10.1016/j.biortech.2018.09.139.
5. Knijnenburg, J.T.N., Hilty, F.M., Oelofse, J., Buitendag, R., Zimmermann, M.B., Cakmak, I., and Grobler, A.F., "Nano- and Pheroid technologies for development of foliar iron fertilizers and iron biofortification of soybean grown in South Africa," *Chemical and Biological Technologies in Agriculture* 5 (2018), 26 (10 pp). DOI: 10.1186/s40538-018-0138-8.
6. Knijnenburg, J.T.N., Posavec, L., and Teleki, A., "Nanostructured Minerals and Vitamins for Food Fortification and Food Supplementation," in: *Nanomaterials for Food Applications* (2018), A. Lopez Rubio, Rovira, M., Sanz, M., and Gomez-Mascaraque, L.G. (Eds.), Elsevier. ISBN: 9780128141311 (eBook), 9780128141304 (Paperback).
7. Posavec, L., Knijnenburg, J.T.N., Hilty, F.M., Krumeich, F., Pratsinis, S.E., and Zimmermann, M.B., "Dissolution and storage stability of nanostructured calcium carbonates and phosphates for nutrition," *Journal of Nanoparticle Research* 18 (2016) 310. DOI: 10.1007/s11051-016-3608-6.
8. Knijnenburg, J.T.N., Seristatidou, E., Hilty, F.M., Krumeich, F., and Deligiannakis, Y., "Proton-promoted iron dissolution from nanoparticles and the influence by the local iron environment," *Journal of Physical Chemistry C* 118 (2014) 24072-24080. DOI: 10.1021/jp506024g.
9. Knijnenburg, J.T.N., Hilty, F.M., Krumeich, F., Zimmermann, M.B., and Pratsinis, S.E., "Multimineral nutritional supplements in a nano-CaO matrix," *Journal of Materials Research* 28 (2013) 1129-1138, DOI: 10.1557/jmr.2013.63.
10. Sotiriou, G.A., Meyer, A., Knijnenburg, J.T.N., Panke, S., and Pratsinis S.E., "Quantifying the origin of released Ag<sup>+</sup> ions from nanosilver," *Langmuir* 28 (2012), 15929-15936. DOI: 10.1021/la303370d.
11. Agrigento, P., Beier, M.J., Knijnenburg, J.T.N., Baiker, A., and Gruttadauria, M., "Highly cross-linked imidazolium salt entrapped magnetic particles - preparation and applications," *Journal of Materials Chemistry* 22 (2012) 20728-20735. DOI: 10.1039/C2JM33021K.
12. Hilty, F.M., Knijnenburg, J.T.N., Teleki, A., Krumeich, F., Hurrell, R.F., Pratsinis S.E., and Zimmermann, M.B., "Incorporation of Mg and Ca into nanostructured Fe<sub>2</sub>O<sub>3</sub> improves Fe solubility in dilute acid and sensory characteristics in foods," *Journal of Food Science* 76 (2011) N2-N10. DOI: 10.1111/j.1750-3841.2010.01885.x.

13. Hilty, F.M., Arnold, M., Hilbe, M., Teleki, A., Knijnenburg, J.T.N., Ehrensperger, F., Hurrell, R.F., Pratsinis, S.E., Langhans, W., and Zimmermann, M.B., "Iron from nanocompounds containing iron and zinc is highly bioavailable in rats without tissue accumulation," *Nature Nanotechnology* 5 (2010) 374-380. DOI: 10.1038/nnano.2010.79.
14. Knijnenburg, J.T.N., Teleki, A., Buesser, B., and Pratsinis, S.E., "Core-shell nanostructures: scalable, one-step aerosol synthesis and in-situ SiO<sub>2</sub> coating and functionalization of TiO<sub>2</sub> and Fe<sub>2</sub>O<sub>3</sub> nanoparticles," in: *Nanostructured Materials and Nanotechnology IV (2010)*, S. Mathur and S.S. Ray (Eds.), John Wiley & Sons, Inc., Hoboken, NJ, USA, p. 1-12. ISBN: 9780470944042 (Online), 9780470594728 (Print).

### **Journal reviews**

Peer review experience for Powder Technology, The Journal of Physical Chemistry, Journal of Nanoparticle Research, ACS Nano, Langmuir, Chemical Engineering Science, Industrial & Engineering Chemistry Research, and Engineering and Applied Science Research.

### **Selected oral presentations**

- 1) Knijnenburg, J.T.N., Massa-Angkul, N., Jetsrisuparb, K., "One-pot synthesis of CNT/Ni electrocatalysts using electrophoretic deposition". The 7<sup>th</sup> Regional Symposium on Electrochemistry – South East Europe (RSE-SEE 7) 2019, Split, Croatia (27/05/2019).
- 2) Knijnenburg, J.T.N., Laohasurayotin, K., Khemthong, P., Kangwansupamonkon, W., "Structure, dissolution, and plant uptake of ferrous/zinc phosphates". The 4<sup>th</sup> International Conference on Contaminated Land, Ecological Assessment and Remediation (CLEAR) 2018, Hong Kong (17/08/2018).
- 3) Knijnenburg, J.T.N., Hilty, F.M, Seristatidou, E., Krumeich, F., Pratsinis, S.E., Deligiannakis, Y., and Zimmermann, M.B., "Nanostructured iron and calcium compounds for nutrition: understanding in vitro dissolution". Nutrition Congress 2014, Johannesburg, South Africa (18/09/2014).
- 4) Knijnenburg, J.T.N., Hilty, F.M, Krumeich, F., Zimmermann, M.B., and Pratsinis, S.E., "Flame-made nanostructured Ca/Fe oxides for nutritional supplements". International Congress on Particle Technology, Nürnberg, Germany (23/04/2013).
- 5) Knijnenburg, J.T.N., Hilty, F.M, Teleki, A., Krumeich, F., Hurrell, R.F., Zimmermann, M.B., and Pratsinis, S.E., "Food fortificants: addition of Mg or Ca to flame-made nanostructured Fe oxides". AIChE 2010 Annual Meeting, Salt Lake City, UT (02/11/2010).