

Journal articles (only SCI(E))

full publication list since 1998

<http://www.refworks.com/refshare/?site=039241152255600000/RWWS2AA1479679/Empa%20Publications&au=zimmermann,t> or https://www.researchgate.net/profile/Tanja_Zimmermann2/reputation;

2307 citations, h-index 22 (without self-citations) (12.11.2017)

1. Veigel, S., Lems, E.-M., Gröll, G., Hansmann, C., Rosenau, T., **Zimmermann, T.**, Gindl-Altmutter, W. **2017**. Simple green route to performance improvement of fully bio-based linseed oil coating using nanofibrillated cellulose. *Polymers* accepted
2. Buffiere, J., Balogh-Michels, Z., Borrega, M., Geiger, T., **Zimmermann, T.**, Sixta, H. **2017**. The chemical-free production of nanocelluloses from microcrystalline cellulose and their use as Pickering emulsion stabilizer. *Carbohydrate Polymers* accepted
3. Sultan, S., Siqueira, G. Zimmermann, T., Mathew, A. **2017**. 3D printing of nano-cellulosic biomaterials for medical applications. *Biomedical Engineering* 2: 29-34
4. Josset, S., Hansen, L., Orsolini, P., Griffa, M., Kuzior, O., Weisse, B., **Zimmermann, T.**, Geiger, T. **2017**. Microfibrillated cellulose foams obtained by a straightforward freeze-thawing-drying procedure. *Cellulose*, DOI 10.1007/s10570-017-1377-8
5. Sehaqui, H., Schaufelberger, L., Michen, B., **Zimmermann, T.** **2017**. Humic acid desorption from a positively charged nanocellulose surface. *Journal of Colloid and Interface Science* 504: 500-506
6. Siqueira, G., Kokkinis, D., Libanori, R., Hausmann, M., Gladman, A. S., Neels, A., Tingaut, P., **Zimmermann, T.**, Lewis, A. S., Studart, A. R. **2017**. Cellulose Nanocrystals Inks for 3D Printing of Textured Cellular Architectures. *Advanced Functional Materials*, DOI: 10.1002/adfm.201604619
7. Stefelova, J., Slovac, V., Siqueira, H., Olsson, R. T., Tingaut, P., **Zimmermann, T.**, Sehaqui, H. **2017**. Drying and pyrolysis of cellulose nanofibers from wood, bacteria and algae for char application in oil absorption and dyes adsorption. *ACS Sustainable Chemistry & Engineering*, DOI: 10.1021/acssuschemeng.6b03027
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9. Weishaupt, R., Siqueira, G., Schubert, M., Kämpf, M. M., Maniura, K.W., **Zimmermann, T.**, Faccio, G. **2017**. A Protein-Nanocellulose Paper for Sensing Copper Ions at the Nano- to Micromolar Level. *Advanced Functional Materials* 27(1604291)
10. Orsolini, P., Marchesi D'Alvise, T., Boi, C., Geiger, T., Caseri, W. R., **Zimmermann, T.** **2016**. Nanofibrillated cellulose templated membranes with high permeance. *ACS Applied Materials & Interfaces*, DOI: 10.1021/acsami.6b12107
11. Winter, A., Andorfer, L., Herzele, S., **Zimmermann, T.**, Saake, B., Edler, M., Griesser, T., Konnerth, J., Gindl-Altmutter, W. **2016**. Reduced polarity and improved dispersion of microfibrillated cellulose in poly(lactic-acid) provided by residual lignin and hemicellulose. *Journal of Materials Science*, DOI: 10.1007/s10853-016-0439-x
12. Sehaqui, H., Michen, B., Marty, E., Schaufelberger, L., **Zimmermann, T.** **2016**. Functional cellulose nanofiber filters with enhanced flux for the removal of humic acid by

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13. Schwiedrzik, J., Raghavan, R., Rüggeberg, M., Hansen, S., Wehrs, J., Adusumalli, R. B., **Zimmermann, T.**, Michler, J. **2016**. Identification of polymer matrix yield stress in the wood cell wall based on micropillar compression and micromechanical modelling. Philosophical Magazine, DOI: 10.1080/14786435.2016.1235292
 14. Grüneberger, F., Huch, A., Geiger, T., **Zimmermann, T.**, Tingaut, P. **2016**. Fibrillated cellulose in heterophase polymerization of nanoscale poly (methyl methacrylate) spheres. Colloid and Polymer Science, DOI: 10.1007/s00396-016-3899-2
 15. Bandera, D., Meyer, V., Prevost, D., **Zimmermann, T.**, Boesel, L. **2016**. Polylactide/Montmorillonite hybrid latex as a barrier coating for paper applications. Polymers 8(3): 75 ff
 16. Zoppe, J. O., Xu, X., Känel, C., Orsolini, P., Siqueira, G., Tingaut, P., **Zimmermann, T.**, Harm-Anton Klok, A. **2016**. Effect of surface charge on surface-initiated atom transfer radical polymerization from cellulose nanocrystals in aqueous media. Biomacromolecules, DOI: 10.1021/acs.biomac.6b00011
 17. Yan, Y., Amer, H., Rosenau, T., Zollfrank, C., Dörrstein, J., Jobst, C., **Zimmermann, T.**, Keckes, J., Veigel, S., Gindl-Altmutter, W., Li, J. **2016**. Dry, hydrophobic microfibrillated cellulose powder obtained in a simple procedure using alkyl ketene dimer. Cellulose, DOI: 10.1007/s10570-016-0887-0
 18. Sedighi Gilani, M., Boone, M. N., Fife, J. L., Zhao, S., Koebel, M. M., **Zimmermann, T.**, Tingaut, P. **2016**. Structure of cellulose –silica hybrid aerogel at sub-micron scale, studied by synchrotron X-ray tomographic microscopy. Composites Sciences and Technology, DOI: 10.1016/j.compscitech.2016.01.013
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 21. Sehaqui, H., Mautner, A., Perez de Larraya U., Pfenninger, N., Tingaut, P., **Zimmermann, T.** **2016**. Cationic cellulose nanofibers from waste pulp residues and their nitrate, fluoride, sulphate and phosphate adsorption properties. Carbohydrate Polymers 135:334-340
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 23. Orsolini, P., Michen, B., Huch, A., Tingaut, P., Caseri, W., **Zimmermann, T.** **2015**. Characterization of pores in dense nanopapers and nanofibrillated cellulose membranes: a critical assessment of established methods. ACS Applied Materials & Interfaces 7(46): 25884-25897
 24. Mautner, A., Maples, H. A., Sehaqui, H., **Zimmermann, T.**, Perez de Larraya, U., Mathew, A.P., Lai, C.Y., Li, K., Bismarck, A. **2015**. Nitrate removal from water using a nanopaper ion-exchanger. Environmental Science: Water Research & Technology, DOI: 10.1039/C5EW00139K
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27. Grüneberger, F., Künniger, T., Huch, A., **Zimmermann, T.**, Arnold, M. **2015**.
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28. Ho, T. T. T., Abe, K., **Zimmermann, T.**, Yano, H. **2015**.
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29. Mueller, S., Sapkota, J., Nicharat, A., **Zimmermann, T.**, Tingaut, P., Weder, C., Foster, E.J. **2015**. Influence of the nanofiber dimensions on the properties of nanocellulose/poly(vinyl alcohol) aerogels. *Journal of Applied Polymer Science* 132(13): 41740ff
30. Sehaqui, H., Galvez, M.E., Becatinni, V., Ng, Y.C., Steinfeld, A., **Zimmermann, T.**, Tingaut, P. **2015**.
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31. Zhang, Z., Tingaut, P., Rentsch, D., **Zimmermann, T.**, Sèbe, G. **2015**.
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35. Gebald, C., Wurzbacher, J.A., Borgschulte, A., **Zimmermann, T.**, Steinfeld, A. **2014**.
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36. Bandera, D., Sapkota, J., Josset, S., Weder, C., Tingaut, P., Gao, X., Foster, E.J., **Zimmermann, T.** **2014**.
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37. Grüneberger, F., Künniger, T., **Zimmermann, T.**, Arnold, M. **2014**.
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38. Sehaqui, H., Perez de Larraya, U., Liu, P., Pfenninger, N., Mathew, A.P., **Zimmermann, T.**, Tingaut, P. **2014**. Enhancing adsorption of heavy metal ions onto biobased nanofibers from waste pulp residues for application in wastewater treatment. *Cellulose* 21: 2831-2844
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44. Ho, T.T.T., **Zimmermann, T.**, Caseri, W. R., Smith, P. **2013**.
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49. Fortunato, G., **Zimmermann, T.**, Lübken, J., Bordeanu, N., Hufenus, R. **2012**.
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51. Gebald, C., Wurzbacher, J., Tingaut, P., **Zimmermann, T.**, Steinfeld, A. **2011**.
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52. Ho, T. T. T., **Zimmermann, T.**, Hauert, R., Caseri, W. **2011**. Preparation and characterization of cationic nanofibrillated cellulose from etherification and high-shear disintegration processes. Cellulose 18(6):1391-1406
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 57. Borges, A., Eyholzer, Ch., Tingaut, P., **Zimmermann, T.**, Bourban, P.E., Manson, A.E. **2010**. Nanofibrillated cellulose reinforced hydrogel for the replacement of the *nucleus pulposus*. Biomaterials 7:3412-3421
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Porous ceramics derived from Wood.
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Radial striation of the S2 layer in mild compression wood tracheids of Pinus radiata.
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Radial fibril agglomerations of the S2 on transverse fracture surfaces of tracheids of tension-loaded spruce and white fir.
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Selected Book(s) (Chapters)

1. Tingaut, P., **Zimmermann, T. 2014.** Chemical Functionalization as a powerful tool to broaden the scope of applications of cellulose nanofibers, in "Handbook of Green Materials: Processing Technologies, Properties and Applications, vol. 1, chapter 9", Editors: Oksman, K., Mathew, A.P., Bismarck, A., Rojas, O., Sain, M. 2014, World Scientific (Ed.).
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4. **Zimmermann, T. 2007.**
Cellulose fibrils in wood cell walls and their potential for technical applications.
Doctoral thesis, Universität Hamburg

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In: Ceramic Materials and Components for Engines, pages 505-511,
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6. Vogt, U., Herzog, A., Graule, T., Kligner, R., **Zimmermann, T.**, Paris, O. **2006**.
Wood derived SiC ceramics with oriented porous structures via carbothermal reduction. In:
High temperature ceramic matrix composites, pages 420-426, ISBN: 9783527605620
7. **Zimmermann, T.**, Pöhler, E., Geiger, T., Schleuniger, J., Schwaller, P., Richter, K. **2006**.
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Empa research report no. 115/50, p. 17-28, Anonymus, 17-28
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Das Feingefüge der Zellwand auf Querbruchflächen von längszugbeanspruchten Laubhöl-
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14. Sell, J., **Zimmermann, T. 1995**.
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ture study on the feasibility of a climate index. EU-Project MAT 1 – CT 940062: A novel ap-
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Diplomarbeit, Universität Hamburg, Fachbereich Biologie, 91 Seiten

Patents

1. **Zimmermann, T.**, Siqueira, G., Josset, S., Tingaut, P., Walesch, D. **2015**. Faseriges Trägermaterial zur Herstellung eines porösen Beschichtungsrohlpapiers oder Vorimprägnates, und Verfahren zu dessen Herstellung. EP15170612.4
2. Josset, S., Tingaut, P., **Zimmermann, T.** **2015**. Method for manufacturing hydrophilic cellulosic nanofibers in low-polarity environments and materials comprising of such nanofibers. PCT/EP003264
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Composite hydrogels. WO2012001629
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Selected invited first author or SCI indexed oral presentations at International Conferences (Conference Papers)

1. **Zimmermann, T.** **2017**.
New perspectives for the application of cellulose nanofibers as building blocks in functional materials. Keynote Talk. Final meeting COST FP1205, Stockholm, Se
2. **Zimmermann, T.** **2017**.
Functionalisation of nanocellulose.
Royal Society International Scientific Seminar, Chicheley Hall, GB
3. **Zimmermann, T.** **2016**.
Functional nanocellulose based materials @ Empa in Switzerland. Plenary lecture
Nanocellulose Summit 2016, Tokyo, JP
4. **Zimmermann, T.** **2016**.
Functional cellulose materials @ Empa.
4th ETH-Chalmers Bilateral Workshop, Zürich, CH
5. **Zimmermann, T.** **2016**.
Nanocellulose based functional materials. Plenary Talk
3rd International Conference on Bio-based Polymers and Composites, Szeged, HU
6. **Zimmermann, T.**, Geiger, T., Tingaut, P. **2016**.
Functional materials from cellulose nanofibers. Keynote Talk
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Feinstruktur und Eigenschaften von Holz. 7. Dreiländer Holztagung Luzern, CH
 51. **Zimmermann T. 1999.**
Das Feingefüge der Holz-Zellwand.
Holzanatomisches Kolloquium (zu Ehren Prof. R. Wagenführ), Dresden, D
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Awards

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2. Tingaut P., Sèbe, G., Zimmermann, T. 2014. Award for the best innovative technique for the environment at The Pollutec 2014 exhibition in Lyon
3. Zimmermann T. 2007.
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4. Bordeanu, N., Eyholzer, Ch., Zimmermann, T. 2007.
Best Poster Award: Chemical tailoring of cellulose-nanofibrils and their applications in (bio)composite materials. NanoEurope, St. Gallen, CH
5. Pöhler, E., Zimmermann, T., Geiger, T. 2004.
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6. Zimmermann, T., Pöhler, E., Richter, K., Geiger, T., Schleuniger, J. 2004.
Collano Förderpreis Innovation: Cellulosefibrillen als Basis für neue Materialeigenschaften.
7. Vogt, U., Herzog, A., Graule, T., Klingner, R., Zimmermann, T. 2001.
CeramTecAward. Poster Porous ceramic structures derived from wood. 7th Conference of the European Ceramic Society.