

# Curriculum Vitae

## DR. CHRISTIAN BINZ

Eawag: Swiss Federal Institute of Aquatic Science and Technology  
Environmental Social Sciences (ESS)  
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## CURRENT POSITIONS

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Since Apr 2017

### **Eawag – Swiss Federal Institute of Aquatic Science and Technology**

- Tenure-track group leader in the department of environmental social sciences (ESS)

Since Jan 2017

### **CIRCLE – Lund University**

- Affiliate Post-Doctoral Researcher at the Center for Innovation, Research and Competence in the Learning Economy

## EDUCATION AND TRAINING

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Mar 2009 – Nov 2012

### **University of Bern, Institute of Geography**

#### **Eawag: Swiss Federal Institute of Aquatic Science and Technology**

- Ph.D. in Geography (summa cum laude). Supervisors: Prof. Urs Wiesmann and Prof. Bernhard Truffer. Ph.D. thesis: *Environmental innovation and industry formation in multiscalar space - The emergence of on-site wastewater treatment in China*

Oct 2003 – Dec 2008

### **University of Bern, Institute of Geography**

- M.Sc. in Geography  
Minors: Economics, Philosophy and Chinese  
Master thesis: *Leapfrogging in urban water management – the development perspectives of decentralized wastewater treatment in China* (with honors)

## PROFESSIONAL AND ACADEMIC EXPERIENCE

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Jul 2015 – Dec 2016

### **CIRCLE – Lund University, Sweden**

- Post-Doctoral Researcher at the Center for Innovation, Research and Competence in the Learning Economy. SNSF-funded early Postdoc.Mobility project

May 2016 – Jun 2016

### **University of the Chinese Academy of Sciences, Beijing, China**

- Visiting Research Fellow at the School Economics and Management  
Fieldwork in China's wind power sector

Jul 2015 – Jul 2016

### **Harvard University - Kennedy School of Government**

- Associate Fellow at the Energy Technology Innovation Policy Program at the Belfer Centre for International Affairs

- Dec 2014 – Mar 2015 **Tsinghua University, Beijing, China**
- Visiting Research Fellow at the School of Public Policy and Management Fieldwork in China's solar photovoltaics sector, organization of a joint Harvard-Qinghua workshop on Energy Technology Innovation Policy
- Sept 2014 – Jul 2015 **Harvard University - Kennedy School of Government**
- Giorgio Ruffolo Post-Doctoral Research Fellow in the Sustainability Science Program and the Energy Technology Innovation Policy Project at the Belfer Center for Science and International Affairs.
- Sept 2013 – Dec 2013 **University of California Berkeley, CA, USA**
- Visiting Scholar at the UC Berkeley Water Center and the NSF Engineering Research Center for Re-Inventing Urban Water Infrastructure (ReNUWIt), fieldwork in California's water reuse industry
- Jan 2013 – Jul 2014 **Eawag: Swiss Federal Institute of Aquatic Science and Technology**
- Post-Doctoral Researcher at the Department for Environmental Social Sciences (ESS). Joint project with UC Berkeley on the legitimation of direct potable water reuse in California; organizing the 4<sup>th</sup> International Conference on Sustainability Transitions; teaching duties
- Sept 2010 – Jun 2011 **Chinese Academy of Sciences, Beijing, China**
- Visiting Ph.D. student at the Research Centre for Eco-Environmental Sciences (RCEES). Conducting fieldwork for the PhD thesis, participating in the group's research activities

## EXTERNAL FUNDING

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### **Received (total: CHF 827'400)**

- Jan 2019 **SNSF Scientific Exchanges**
- Funding for an international expert workshop on "Transformation of coupled social-ecological and socio-technical systems: Defining the contours of an integrative research agenda" (CHF 12'000)
- Apr 2018 **Eawag Discretionary Funding**
- Overcoming institutional barriers to non-grid urban water systems – comparing lighthouse cities for WINGS (BARRIERS), (3 years, 1 PostDoc, CHF 340'000)
- Apr 2018 **Swiss National Science Foundation, project funding in the social sciences**
- Global socio-technical regimes in the water sector (GLORIWA), (4 years, 1 PhD, 1 research assistant 1 year, CHF 330'000)
- Mar 2015 **Harvard University, Sustainability Science Program (SSP)**
- Collaborative Research among SSP Fellows (5'400 US\$, 1 year) *'Spatial Dynamics in the Knowledge Base of Clean-Tech Sectors'*
- Jun 2014 **Harvard University, Sustainability Science Program (SSP)**
- Giorgio-Ruffolo Post-Doctoral Fellowship in Sustainability Science (55'000 US\$, 1 year). Project title: *Low-Carbon Leapfrogging in China - An International Innovation System Perspective*
- May 2014 **Swiss National Science Foundation**
- Early Post Doc.Mobility Scholarship (85'000 CHF, 1.5 years). Project title: *Globalization of cleantech industries – Reconstructing China's integration into the global innovation networks of wind power and solar photovoltaics*

## TEACHING AND SUPERVISION

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| since Sept 2019     | <p><b>University of Lausanne</b></p> <ul style="list-style-type: none"> <li>▪ Member of the PhD committee of Andrea Ferloni</li> </ul>   |
| since Sept 2018     | <p><b>Eawag</b></p> <ul style="list-style-type: none"> <li>▪ Main supervisor of the PhD thesis of Andri Brugger</li> </ul>   |
| since May 2018      | <p><b>Eawag, Utrecht University</b></p> <ul style="list-style-type: none"> <li>▪ Co-supervisor for the PhD thesis of Jonas Heiberg</li> </ul>  |
| since May 2018      | <p><b>Università degli studi Firenze</b></p> <ul style="list-style-type: none"> <li>▪ Guest Lecturer in the Master course 'Environment and Development', (3 ECTS)</li> </ul>   |
| Dec 2017            | <p><b>Université de Neuchâtel</b></p> <ul style="list-style-type: none"> <li>▪ Guest Lecturer in the Bachelor course 'Géographie économique', (3 ECTS)</li> </ul>  |
| since Apr 2017      | <p><b>CIRLCE – Lund University</b></p> <ul style="list-style-type: none"> <li>▪ Guest Lecturer in the annual Master course 'Globalization and Innovation', (7.5 ECTS)</li> </ul>   |
| May 2016 – Jan 2017 | <p><b>CIRCLE – Lund University</b></p> <ul style="list-style-type: none"> <li>▪ Supervising two master students in a joint master thesis on global innovation networks of Chinese wind power companies</li> </ul>  |
| Nov 2014 – Aug 2015 | <p><b>Harvard University, Sustainability Science Program (SSP)</b></p> <ul style="list-style-type: none"> <li>▪ Supervising two research interns in projects on renewable energy policy/industrial dynamics in cleantech sectors</li> </ul>  |
| Feb 2013 – Jul 2013 | <p><b>University of Bern, Institute of Geography</b></p> <ul style="list-style-type: none"> <li>▪ Master Seminar: Eco-Innovation in Economic Geography (Main lecturer, 7 ECTS)</li> </ul>  |
| Feb 2010 – Jul 2014 | <p><b>University of Bern, Institute of Geography</b></p> <ul style="list-style-type: none"> <li>▪ Master course: Innovation systems in space and time (held by Prof. B. Truffer)<br/>Teaching assistant, holding lectures, supervising and correcting exams</li> </ul>   |
| Apr 2006 – Feb 2009 | <p><b>University of Bern, Institute of Geography</b></p> <ul style="list-style-type: none"> <li>▪ Junior research assistant at the research group for economic geography and regional sciences. Organizing and correcting undergraduate level exams, assistant in teaching and research activities, web administrator</li> </ul> |

## ACADEMIC SERVICE

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| Feb – Aug 2019 | <p><b>Alpen-Adria University Klagenfurt</b></p> <ul style="list-style-type: none"> <li>▪ Member of the selection committee of a full professorship in geography and regional studies</li> </ul> |
| Jun 2019       | <p><b>Sustainability Transitions Research Network</b></p> <ul style="list-style-type: none"> <li>▪ Elected member of the steering group</li> </ul>  |
| Jun 2019       | <p><b>IST conference, Ottawa, CA</b></p> <ul style="list-style-type: none"> <li>▪ Main organizer of a dialogue session on 'sectorial configurations in sustainability transitions'</li> </ul>   |

- May 2019 **International expert workshop, Eawag, CH**
- Main organizer of an international expert workshop on ‘Transformation of coupled social-ecological and socio-technical systems: Defining the contours of an integrative research agenda’
- Apr 2019 **AAG conference, Washington DC, USA**
- Organizer of three special sessions on ‘Emerging industries: Institutions, legitimacy and system building’
- Jun 2018 **IST conference, Manchester, UK**
- Organizer of a dialogue session on ‘*Transition studies and sustainability science- Interesting intersections ahead?*’; Invited panellist in a dialogue session on ‘*Recent advances in TIS research – Towards a new phase in transition studies?*’
- Nov 2017 **BMBF, Germany**
- Invited member in the selection committee for a national research program on *Future climate-resilient cities*.
- Dec 2016 **Lund University, Faculty of Engineering**
- Committee member of the Ph.D. defense of Jingjing Zhang. PhD title: *Energy innovation and sustainability transitions in China*
- Mar 2016 **AAG annual meeting, San Francisco CA**
- Organizer of 4 special sessions on ‘Economic geography and Grand Challenges’
- Apr 2015 **AAG annual meeting, Chicago, IL**
- Organizer of a special session stream on “Socio-Technical (Sustainability) Transitions in the making: emerging geographies of eco-innovation”
- Feb - Jul 2014 **Harvard University, Qinghua University**
- Organizing and preparing the background materials for a Harvard-Qinghua workshop on energy technology innovation policy
- Jan – Jun 2013 **4<sup>th</sup> International Conference on Sustainability Transitions, Zurich, CH**
- Co-director of the organizing committee
- Since 2012 **Reviewer**
- Research Policy, PNAS, Economic Geography, Technological Forecasting & Social Change, Regional Studies, Environmental Innovation and Societal Transitions, Environment and Planning A, Journal of Cleaner Production, Water Research, Environmental Science and Policy, Industrial and Corporate Change, Cambridge Journal of Regions, Economy and Society, Energy Policy, European Planning Studies, Energy Research and Social Sciences, Science and Public Policy, Land Use Policy, Total Quality Management & Business Excellence, Technology Analysis & Strategic Management, Sustainability, Journal of Environmental Management, Business & Politics, Climate Policy, Urban Studies, International Journal on Innovation Studies, Review of Regional Research, IST conferences, GLOBELICS conferences, DRUID conferences, KLI Vienna

## SELECTED INVITED LECTURES

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- Nov 2019 **Chinese Academy of Sciences, Beijing**, Expert workshop on green windows of opportunity for catching up in China. Invited lecture: “Catch-up cycles in global innovation systems – A comparison of four Chinese cleantech industries”
- May 2018 **University of Oldenburg**, Workshop of the German Research Foundation’s Emmy Noether Programme Project „Regional Energy Transition“ (REENEA). Invited lecture:

“Transnational innovation dynamics – Space, scale and the regional dimension of technological innovation systems”

- Nov 2017 **European Association for Evolutionary Political Economy**, 3rd EAEPE ‘Networks’ Workshop, Bremen, DE. Invited keynote lecture. “Global Innovation Systems – A conceptual typology of innovation networks in cleantech industries”
- Apr 2017 **American Association of Geographers annual meeting**, Boston, MA. Invited Panelist. “Extra-regional dynamics of territorial development - Insights from a circulation and anchoring perspective”
- Apr 2017 **Sustainability Science Program, Harvard University**, Cambridge, MA. Invited Lecture. “Pathways towards Sustainable Development: Transforming Global Socio-Technical Regimes”
- May 2016 **Aalborg University**, Aalborg, DK. Invited Lecture for the IKE seminar. “Transplanting cleantech paths from elsewhere – The emergence of the Chinese Solar PV industry”
- Jun 2016 **EU-SPRI conference**, Lund, SE. Panelist. “Fostering innovation and industrial development in international innovation systems: Policy challenges of a multipolar global economy”
- Dec 2015 **Utrecht University, Faculty of Geosciences**. Invited Seminar Speaker. “*The thorny road to technology legitimation - Institutional work for potable water reuse in California*”
- Apr 2015 **American Association of Geographers annual meeting**, Chicago, IL. Invited Panelist. “*Forging Green Path Creation: EEG, GPNs and Sustainability Transitions.*”
- Apr 2015 **Harvard Kennedy School Energy Policy Seminar Series**. Invited Speaker, “*Low-carbon leapfrogging and globalization: How China developed its solar PV industry*”
- Apr 2015 **Tufts University Sino-US Relations Group Engagement, China – US Symposium**. Invited Panelist. “Towards global governance of clean-tech innovation”
- Dec 2014 **Qinghua University, SPPM, Innovation Policy Seminar Series**. Invited Seminar Speaker, “*Low-carbon leapfrogging in China - a global innovation system perspective*”
- Sept 2013 **UC Berkeley, Environmental Engineering Seminar Series**. Invited Speaker. “*Reinventing the Urban Water Sector? A socio-technical systems perspective*”

## HONORS AND AWARDS

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- Jun 2017 **International Conference on Sustainability Transitions (IST), Gothenburg, SE**
- Best paper award (1 out of 300 papers selected)
- Aug 2014 **International Conference on Sustainability Transitions (IST), Utrecht, NL**
- Nominated for the best paper award (3 out of 150 papers nominated)
- Mar 2009 **Final MBR workshop, Berlin**
- Best Ph.D. student poster (EUR 1'000)
- Dec 2008 **University of Bern**
- Best master thesis of the Faculty of Geosciences (CHF 1'000)

## INTERNATIONAL NETWORKS

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Member:	Sustainability Transitions Research Network (STRN), International Water Association (IWA), Association of American Geographers (AAG), Beijing Energy Network (BEN), Great Transition Network, Regional Studies Association (RSA), Swiss Research Society for urban planning and regional policy (ROREP)
Conferences (presentations & posters):	International Conference on Sustainability Transitions (7x), Association of American Geographers annual meeting (5x), GLOBELICS (3x), Geography of Innovation conference (3x), DIME workshops (2x), Harvard-Qinghua workshop on energy innovation policy (2x), DRUID annual conference (2x), Leverage Points Conference 2019, Sustainability Science Symposium 2016, Global Conference on Economic Geography 2018, RSA annual meeting 2017, Annual Water Reuse & Desalination Research Conference 2014, International conference on Sustainability Science 2010, Final MBR workshop 2009

## OTHER PROFESSIONAL ACTIVITIES

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Since 2019	Member of the selection committee for EPP fellowships at Eawag
Since 2017	Webmaster of the webpage of the ESS research department
Since 2017	Co-head of an ESS-internal working group on 'collective action in the social sciences'

## LANGUAGES

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German	Mother Tongue
English	Full professional proficiency
Chinese	Professional working proficiency (passed new HSK level 4)
Italian	Professional working proficiency
French	Limited working proficiency

## LEADERSHIP AND EXTRA-CURRICULAR EXPERIENCE

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Mar 2019	<b>Laebigi Stadt (Environmental NGO)</b> Elected member of the managing board
June 2018	<b>Fachhochschule Nordwestschweiz</b> Passed CAS course on 'leadership in science'
2009-2014	<b>Winter Swimming Club Bern</b> Founder, former president and head of the PR division
Since Apr 2011	<b>von waldkirch PR&amp; NEW MEDIA GmbH, CameraBern</b> Freelance video journalist, producing and cutting video reports on international policy symposia
Since Aug 2002	<b>Blues Brothers Bern, Haettrick music, Hinz &amp; Binz, Swedish chef &amp; the köttbullar</b> Founding member, playing blues harp and piano, producing music videos

**PEER-REVIEWED PUBLICATIONS**

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***Under preparation/review***

- Binz, C., Gosens, J., Yap, X., Yu, Z., under review. Catching-up in global innovation systems – A comparison of four Chinese cleantech industries. Paper presented at the 2018 GLOBELICS conference.
- Gosens, J., Binz, C., under review. Emerging economy activity in niche technologies and the origin of innovation system resources: the case of Concentrated Solar Power in China.
- Binz, C., Harley, A., Clark, William C., submitted. Transition pathways toward Sustainable Development – An Analytical Framework and a Case Study. Paper submitted to the independent group of experts writing the UN's 2018 sustainable development goals report.
- Binz, C., Gong, H., submitted. Legitimation dynamics in industrial path development: new-to-the-region versus new-to-the-world industries. Paper presented at the 2019 AAG conference.
- Hoffmann, S., Feldmann, U., Binz, C., Hiessl, H., Inauen, J., Lienert, J., Luethi, C., Maurer, M., Farrelly, M., Londong, J., Bach, P., Udert, K., Morgenroth, E., Mitchell, C., Larsen, T., Truffer, B., Scholten, L., Frantzeskaki, N., under review. A research agenda for the future of urban water management: Exploring the potential of non-grid solutions. To be submitted to ES&T.
- Heiberg, J., Truffer, B., Binz, C., submitted. The Geography of Technology Legitimation - mapping multi-scalar value generation around modular water technologies. Paper presented at the 2018 Global conference on Economic Geography.
- Yap, X., Binz, C., Truffer, B., under preparation. Catching-up meets sustainability: contemplating latecomer strategic trade-offs when facing emerging windows of opportunity in clean technologies. Paper presented at the 2018 Global Conference on Economic Geography.
- Kiparsky, M., Williams, C., Binz, C., under preparation. Strategic alliances for reducing perceived risk of innovation: emerging intermediary actors in the wastewater sector. To be submitted to Water Resources & Management.
- Binz, C., under preparation. Emerging interfaces of transition studies and sustainability science – A literature review and outlines of a future research agenda. Paper presented at the 2018 IST conference and 2019 Leverage Points Conference.

***Accepted***

- Binz, C., Truffer, B., forthcoming. The Governance of Global innovation Systems - Putting knowledge in context. In: Gluckler, J. (Ed.), Knowledge for Governance. Springer, Heidelberg.

***Published or in press***

- Binz, C., Coenen, L., Murphy, J., Truffer, B., submitted 2020. Geographies of transition in the updated STRN agenda: State of the art, or state of the old?
- Hipp, A., Binz, C., 2020. Firm survival in complex value chains and global innovation systems: Evidence from solar photovoltaics. *Research Policy* 49 (1).
- Gebauer, H., Binz, C., 2019. Regional benefits of servitization processes: evidence from the wind-to-energy industry. *Regional Studies* 53 (3), 366-375.
- Binz, C., Diaz Anadon, L., 2018. Unrelated diversification in latecomer contexts—The emergence of the Chinese solar photovoltaics industry. *Environmental Innovation & Societal Transitions* (in press).
- Fuenfschilling, L., Binz, C., 2018. Global socio-technical regimes. *Research Policy* 47 (4), 735-749.
- Binz, C., Kiparsky, M., Bronte Razavian, N., 2018. Of Dreamliners and Drinking Water: Developing Risk Regulation and a Safety Culture for Direct Potable Reuse. *Water Resources Management* 32 (2), 511-525.

- Binz, C., Truffer, B., 2017. Global Innovation Systems – towards a conceptual framework for systemic innovation conditions in transnational contexts. *Research Policy* 64 (7), 1284-1298.
- Binz, C., Gosens, J., Hansen, T., Hansen, U.E., 2017. Towards technology-sensitive catching-up policies: Insights from renewable energy in China. *World Development* 96, 418-437.
- Binz, C., Tang, T., Huenteler, J., 2017. Spatial Lifecycles of Cleantech Industries - the Global Development History of Solar Photovoltaics. *Energy Policy* 101, 386-402
- Binz, Christian; Truffer, Bernhard, 2017. Cities as Mediators between Local Niches and Global Networks, the Transition to Onsite Water Recycling in Three Chinese Cities. In: *Urban Sustainability Transitions*, edited by Frantzeskaki, Niki, Lars Coenen, Vanessa Castan Broto and Derk Loorbach. London: Routledge
- Kiparsky, M., C. Binz, B. Thompson, B. Truffer, D. Sedlak, A. Simmons, and L. Tummers (2016). Barriers to Innovation in Urban Wastewater Utilities: Attitudes of Managers in California. *Environmental Management* 57 (6), 1204-1216.
- Binz, Christian; David Sedlak; Sasha Harris-Lovett; Michael Kiparsky, and Bernhard Truffer (2016). The thorny road to technology legitimation – Institutional work for potable water reuse in California. *Technological Forecasting & Social Change* (103), 249-263.
- Binz, Christian; Truffer, Bernhard; Coenen, Lars (2016): Path creation as a process of resource alignment and anchoring – Industry formation for on-site water recycling in Beijing. *Economic Geography*, 92 (2), 172-200.
- Harris-Lovett, Sasha; Christian Binz; David Sedlak; Michael Kiparsky; and Bernhard Truffer (2015). Beyond User Acceptance: A Legitimacy Framework for Potable Water Reuse. *Environmental Science & Technology*, 49, 7552-7561.
- Binz, Christian; Truffer, Bernhard; Coenen, Lars (2014): Why space matters in technological innovation systems – Mapping global knowledge dynamics of membrane bioreactor technology. *Research Policy* 43, 138-155.
- UNEP (2013): City-level decoupling: Urban resource flows and governance of infrastructure transitions. A report of the working Group on Cities of the International Resource Panel. Eds: Swilling M., Robinson B., Marvin S., Hodson M. (contributing author).
- Li, Li; Binz, Christian; Lu, Yonglong; Truffer, Bernhard; Shi, Yajuan (2013): Institutional trajectory for diffusing on-site wastewater treatment in urban China. *Water Science and Technology* 68 (5), 1180-1187.
- Binz, Christian (2012): Environmental innovation and industry formation in multiscale space - The emergence of onsite wastewater treatment in China. Dissertation at the Geographic Institute of the University of Bern.
- Binz, Christian and Truffer, Bernhard (2012): Technological innovation systems in multi-scalar space - Analyzing an emerging water recycling industry with social network analysis. *Geographica Helvetica* 66 (4): 254-260.
- Binz, Christian; Truffer, Bernhard; Li, Li; Shi, Yajuan; Lu, Yonglong (2012): Conceptualizing leapfrogging with spatially coupled innovation systems: The case of onsite wastewater treatment in China. *Technological Forecasting and Social Change* 79 (1), 155-171.
- Truffer, Bernhard; Binz, Christian; Gebauer Heiko; Stoermer, Eckhard (2012): Market success of on-site treatment: a systemic innovation problem. In Larsen, T.A. Udert, K.M., Lienert, J. (eds.) *Wastewater Treatment: Source Separation and Decentralisation*. IWA Publishing 2012 pp. 209 – 223.
- Gebauer, Heiko; Truffer, Bernhard; Stoermer, Eckhard; Binz, Christian (2012): Capability perspective on business network formation: Empirical evidences from wastewater treatment industry. *European Business Review*, 24 (2), 169–190.

#### **NON PEER-REVIEWED PUBLICATIONS**

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- Binz, Christian; Chan, Gabriel; Doblinger, Claudia; Huenteler, Joern; Shi, Dongbo; Tang, Tian; Xu, Lei; Diaz Anadon, Laura, 2015. Energy Technology Innovation Policy in the backdrop of the U.S.-China Emissions



Deal. Background Materials for a joint Harvard-Qinghua Workshop on Energy Technology Innovation Policy, Belfer Center for Science and International Affairs, Harvard University, Cambridge MA.

Störmer, E., Binz, C., Truffer, B. 2010: Globale Herausforderung für die Siedlungswasserwirtschaft. Ein Roadmapping für dezentrale Wassertechnologien im Jahr 2020. Technikfolgenabschätzung – Theorie und Praxis 19. Jg., Heft 1, April 2010, pp 40-48.

Binz, C. 2012. Kommt die Grauwassertechnologie der Zukunft aus China? Fbr-Wasserspiegel 4/12, p.12-13

Binz, C. 2012. Kommt das WC der Zukunft aus China? SwissEngineering STZ, 9, 2012. P. 24-25

Various blog-reports from my 1-year visiting PhD position at the Chinese Academy of Sciences in Beijing on swissinfo.ch; e.g. <http://www.swissinfo.ch/ger/wohnen-in-der-chinesischen-immobilienblase/29800648>

3 Eawag-News articles in cooperation with A. Jordi, e.g. [‘Innovationen zum Fliegen bringen’](#)