

Prof. Dr. Mark W. Tibbitt

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Personal Information

Born: 1985; Princeton, New Jersey, USA
Citizenship: USA
Societies: Member of AAAS, ACS, AIChE, MRS, and SSB+RM

Education

2007–2012 Ph.D., Chemical Engineering, University of Colorado Boulder, USA
2003–2007 B.A., Integrated Science and Mathematics, Northwestern University, USA
Magna Cum Laude; Phi Beta Kappa, Pi Mu Epsilon

Professional Appointments

2023– Associate Professor, ETH Zurich, CH
2017–2023 Assistant Professor (tenure-track), ETH Zurich, CH
2013–2017 Postdoctoral Fellow under Prof. Robert Langer, MIT, USA
2007–2012 Ph.D. Student under Prof. Kristi S. Anseth, University of Colorado Boulder, USA

Honors and Awards

2023 ALEA Leadership Award finalist; *ETH Zurich*; CH
2020 Joliot Invited Professor; SIMM Lab at the *ESPCI Paris*; FR
2020 Spark Award Finalist (top 5 inventions of 2019); *ETH Zurich*; CH
2019 Golden Owl Award for Excellent Teaching (student selected); *ETH Zurich*; CH
2017 Innovation and Technology Delegate; *Academy of Achievement*; USA
2015–2017 Ruth L. Kirschstein Postdoctoral Fellowship; *National Institutes of Health*; USA
2014 AHA Postdoctoral Fellowship (declined); *American Heart Association*; USA
2014 Fund for Medical Discovery Award; *Massachusetts General Hospital*; USA
2014 Misrock Postdoctoral Fellowship; *Misrock Foundation*; USA
2013 AkzoNobel Student Award in Applied Polymer Sciences; *ACS*; USA
2013 Outstanding Biomaterials Thesis Award; *Max Bergmann Center*; DE
2012 Student Award for Outstanding Research – Ph.D. Candidate; *SFB*; CN
2012 Excellence in Graduate Polymer Research Award; *ACS*; USA
2012 Max S. Peters Outstanding Ph.D. Graduate Award; *University of Colorado*; USA
2012 American Institutes of Chemists Grad Student Award; *University of Colorado*; USA
2011 Lindau Fellow (U.S. Delegation); *61st Lindau Nobel Laureate Meeting*; Germany
2011 Graduate Student Faculty Leadership Award; *University of Colorado*, USA
2011 Student Travel Achievement Research Award; *SFB*; USA
2010–2011 Best Should Teach Silver Award; *University of Colorado*; USA
2010–2012 Teets Family Endowed Doctoral Fellowship; USA
2010 Outstanding Graduate Teaching Award; *University of Colorado*; USA
2009–2011 Molecular Biophysics Training Grant; *National Institutes of Health*; USA
2008–2010 Biomolecular GAANN Predoctoral Fellowship; *U.S. Department of Education*; USA
2007 Phi Beta Kappa; *Northwestern University*; USA
2006–2007 Ernest F. Hollings Scholarship; *NOAA*; USA

Professional Activities

2021– Executive Board Member, ALIVE Initiative, ETH Zurich
2020– Executive Committee Member, Swiss Society for Biomaterials + Regenerative Medicine

Funded Research Proposals

2023–2026	SNSF, Sinergia “Skin stretch: unraveling the complexity of mechanotransduction across scales”	CHF 794'000 Total: CHF 2'971'746
2023–2025	BRIDGE Discovery “Acoustofluidic platform for 3D positioning of microtissues for efficient microhistology”	CHF 438'000 Total: CHF 1'584'951
2022–2026	SNSF, NRP 79 “Advancing 3R–Animals, Research and Society” “Replacement of xenograft mouse models by molecularly-defined 3D in vitro models” Dengjel (U. Fribourg), Tibbitt; co-PIs	CHF 339'830 Total: CHF 751'166
2022–2025	SFA-AM “ALIVE: Engineering with Living Materials” Interdisciplinary Consortium led by E. Chatzi (BAUG) and Tibbitt Involves ~20 co-PIs on three main workstreams	CHF 100'000 Total: CHF 2'700'000
2021–2024	ETH Research Grant , “Lipid nanoparticle-mediated mRNA delivery for ex situ liver regeneration” Tibbitt; PI	CHF 246'800
2021–2025	SFA-AM , Project Funding “Digitally printed temporary protective films for application in the watch industry (DiPrintProtect)” Romanyuk, Heier (EMPA), Leterrier (EPFL) Tibbitt; co-PIs	CHF 291'200 Total: CHF 1'145'000
2021–2024	Wyss Translational Center Zurich “Liver4Life: Research and Clinical Trial” Clavien, Tibbitt, Hefti; co-PIs	CHF 2'920'000 Total: CHF 5'840'000
2020–2023	ETH+ / SKINTEGRITY.CH “Bioengineered 3D culture systems for skin” Tibbitt; PI (sub-project of SKINTEGRITY.CH research consortium)	CHF 200'000
2020–2022	Helmut Horten Stiftung “Immune-modulatory biomaterials for personalized healing of chronic wounds” Tibbitt; PI	CHF 300'000
2019–2023	SNSF , SNSF Project Funding “Next-generation moldable gels via combined polymer-colloid self-assembly and supramolecular chemistry” Tibbitt; PI	CHF 805'850
2019–2023	André and Hedy Knoll-Spring Stiftung “Macromolecular Engineering” Tibbitt; PI	CHF 12'000
2019–2022	Fondation Claude & Giuliana “Verfahrenstechnik” Tibbitt, Arosio, Mazzotti, Müller; co-PIs	CHF 80'000 Total: CHF 320'000
2019–2020	Innosuisse , Impulse – Digitalization in biofabrication “Design, recombinant production and testing of innovative protein scaffolds as inks for 3D bioprinting” Hilvert, Peters, Tibbitt; co-PIs	CHF 146'850 Total: CHF 695'000
2018–2020	Sponsored research project , Nanoly Bioscience, Inc. “Dynamic hydrogels for thermal stabilization of biologics” Tibbitt; PI	CHF 130'710

TOTAL GRANTED: CHF 6'805'240

Funds acquired by the group without Tibbitt as PI or co-PI:

2021–2025	SNSF , SNSF Ambizione Grant “Slide-ring networks using high-affinity host–guest inclusion complexation” Dr. Stefan Mommer, PI	CHF 825'324
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Publications

in the following publication list † indicates equally contributing first authors; * indicates corresponding author(s); first authors from the Macromolecular Engineering Laboratory at ETH Zurich are underlined

Publications from work performed at ETH Zurich (2017–present)

77. C.S. Sanger, M. Cernakova, M.S. Wietecha, L. Garau Paganella, C. Labouess, O.Y. Dudaryeva, C. Roubaty, M. Stumpe, E. Mazza, M.W. Tibbitt, J. Dengjel, and S. Werner* “Serine protease 35 regulates the fibroblast matrisome in response to hyperosmotic stress.” *Sci. Adv.* **in press**.
76. R.X. Sousa Da Silva, L. Bautista Borrego, D. Lenggenhager, F. Huwyler, J. Binz, L. Mancina, E. Breuer, K. Wernle, M. Hefti, M. Muller, L. Cunningham, M.L. De Oliveira, H. Petrowsky, A. Weber, P. Dutkowski, W. Hoffmann, A. Gupta, M.W. Tibbitt, B. Humar, and P.A. Clavier* “Defatting of human livers during long-term ex situ normothermic perfusion. Novel strategy to rescue discarded organs for transplantation,” *Ann. Surg.* (2023). <https://doi.org/10.1097/sla.0000000000006047>
75. F. Huwyler, J. Eden, J. Binz, L. Cunningham, R.X. Sousa Da Silva, P.A. Clavier, P. Dutkowski*, M.W. Tibbitt*, and M. Hefti* “A spectrofluorometric method for real-time graft assessment and patient monitoring,” *Adv. Sci.* (2023). <https://doi.org/10.1002/advs.202301537>
74. A.v. Straeten†, M. Sarmadi†, J.L. Daristotle†, M. Kanelli, J. Collins, L.H. Tostanoski, A. Pardeshi, J. Garcia, G. Li, N. Menon, J. Han, D. Varshney, C. Jacob-Dolan, O. Powers, M. Wolf, M.W. Tibbitt, R. Farra, D. Barouch, R. Langer*, and A. Jaklenec* “A mobile vaccine printer enables on-demand manufacturing of thermostable microneedle patches for COVID-19 mRNA vaccines,” *Nat. Biotechnol.* (2023). <https://doi.org/10.1038/s41587-023-01774-z>
73. M.J. Schuler, D. Becker, M. Mueller, L. Bautista Borrego, L. Mancina, F. Huwyler, J. Binz, C. Hagedorn, B. Schar, E. Gygax, M. Weisskopf, R.X. Sousa Da Silva, J.M. Antunes Crisostomo, P. Dutkowski, P. Rudolf von Rohr, P.A. Clavier, M.W. Tibbitt, D. Eshmuminov, and M. Hefti “Observations and findings during the development of a submormothermic/normothermic long-term ex vivo liver perfusion machine,” *Artif. Organs* **47**, 317–329 (2023).
72. A.P. Kourouklis, A. Wahlsten, A. Stracuzzi, A. Martyts, L.G. Paganella, C. Labouesse, D. Al-Nuaimi, C. Gampetro, A.E. Ehret, M.W. Tibbitt, and E. Mazza* “Control of hydrostatic pressure and osmotic stress in 3D cell culture for mechanobiological studies,” *Biomater. Adv.* **145**, 213241 (2023).
71. D.B. Emiroglu, A. Bekcic, D. Dranseikiene, X. Zhang, T. Zambelli, A.J. DeMello, and M.W. Tibbitt* “Building block properties govern granular hydrogel mechanics through contact deformations,” *Sci. Adv.* **8**, eadd8570 (2022).
70. E. Vuille-dit-Bille, D.V. Deshmukh, S. Connolly, S. Heub, S. Boder-Pasche, J. Dual, M.W. Tibbitt, and G. Weder* “Tools for manipulation and positioning of microtissues” *Lab Chip* **22**, 4043–4066 (2022).
69. G. Bovone, L. Cousin, F. Steiner, and M.W. Tibbitt* “Solvent controls nanoparticle size during nanoprecipitation by limiting block copolymer assembly” *Macromolecules* **55**, 8040–8048 (2022).
68. B. Marco-Dufort, J.R. Janczy, T. Hu, D. Busha, M. Lutolf, F. Gatti, M. Wolf, A. Woods, S. Tetter, B.V. Sridhar, and M.W. Tibbitt* “Thermal stabilization of diverse biologics using reversible hydrogels,” *Sci. Adv.* **8**, eabo0502 (2022).
67. T. Komsthoft, G. Bovone, S. Bernhard, and M.W. Tibbitt* “Polymer functionalization of inorganic nanoparticles for biomedical applications,” *Curr. Opin. Chem. Eng.* **37**, 100849 (2022).
66. D.V. Deshmukh, P. Reichert, O.Y. Dudaryeva, J. Zvick, O. Bar-Nur, M.W. Tibbitt*, and J. Dual* “Continuous production of acoustically patterned cells within hydrogel fibers for musculoskeletal tissue engineering,” *Adv. Funct. Mater.* **32**, 2113038 (2022).
65. P.A. Clavier*, P. Dutkowski, M. Mueller, D. Eshmuminov, L. Bautista Borrego, A. Weber, B. Muellhaupt, R. X. Sousa Da Silva, B. Burg, P. Rudolf von Rohr, M.J. Schuler, D. Becker, M. Hefti, and M.W. Tibbitt “Transplantation of a human liver following 3 days of ex situ normothermic perfusion,” *Nat. Biotechnol.* **40**, 1610–1616 (2022). [highlighted with a *Research Briefing*]
64. M.J. Webber* and M.W. Tibbitt* “Dynamic and reconfigurable materials from reversible network interactions,” *Nat. Rev. Mater.* **7**, 541–556 (2022).

63. N. Klubthawee[†], G. Bovone[†], B. Marco-Dufort, E.A. Guzzi, R. Aunpad*, and M.W. Tibbitt*, “Biopolymer nano-network for antimicrobial peptide protection and local delivery,” *Adv. Healthc. Mater.* **11**, 2101426 (2022).
62. G. Bovone[†], E.A. Guzzi[†], S. Bernhard[†], T. Weber, D. Dranseikiene, and M.W. Tibbitt* “Supramolecular reinforcement of polymer–nanoparticle hydrogels for modular materials design,” *Adv. Mater.* **34**, 2106941 (2022).
61. D. Eshmuminov[†], M. Hefti[†], M. Mueller[†], M.J. Schuler, L. Bautista Borrego, M.A. Schneider, K. Koch, M. Lipiski, M.W. Tibbitt, P. Dutkowski, P. Rudolf von Rohr, J.D. Studt*, D. Becker*, and P.A. Clavien* “Synthesis of coagulation factors during long-term ex situ liver perfusion,” *Artif. Organs* **46**, 273–280 (2021).
60. C.F.T. van der Ven, M.W. Tibbitt, J. Conde, A. van Mil, P.A.F.M. Doevendans, J.P.G. Sluijter, J. Hjortnaes, E. Aikawa, and R. Langer* “Controlled delivery of functional gold nanoparticle-coupled miRNA therapeutics via an injectable self-assembled hydrogel,” *Nanoscale* **13**, 20451–20461 (2021).
59. O.Y. Dudaryeva, A. Bucciarelli, G. Bovone, F. Huwyler, S. Jaydev, N. Broguiere, M. al-Bayati, M. Lütolf, and M.W. Tibbitt* “3D confinement regulates cell life and death,” *Adv. Funct. Mater.* **31**, 2104098 (2021).
58. H. Ragelle[†], S. Rahiman[†], E.A. Guzzi, P. Westenskow, M.W. Tibbitt, G. Schwach*, and R. Langer* “Additive manufacturing in drug delivery: Innovative drug product design and opportunities for industrial application,” *Adv. Drug Deliv. Rev.* **178**, 113990 (2021).
57. E.A. Guzzi, R. Bischoff, D. Dranseikiene, D. Deshmukh, A. Wahlsten, G. Bovone, S. Bernhard, and M.W. Tibbitt* “Hierarchical biomaterials via photopatterning-enhanced direct ink writing,” *Biofabrication* **13**, 044105 (2021).
56. M. Müller[†], M. Hefti[†], D. Eshmuminov, M.J. Schuler, R. Sousa Da Silva, H. Petrowsky, M.L. de Oliverira, C.E. Oberkofler, C. Hagedorn, L. Mancina, A. Weber, B. Burg, M.W. Tibbitt, P. Rudolf von Rohr, P. Dutkowski, D. Becker*, L. Bautista Borrego*, P.A. Clavien* “Long-term normothermic machine perfusion preservation of partial livers: First experience with 21 human hemi-livers,” *Ann. Surg.* **274**, 836–842 (2021).
55. D. Eshmuminov[†], M. Mueller[†], S.D. Brugger[†], L. Bautista Borrego, D. Becker, M. Hefti, C. Hagedorn, M. Duskabilova, M.W. Tibbitt, P. Dutkowski, P. Rudolf von Rohr, B. Stieger, M.J. Schuler*, Nicholas J. Mueller*, and P.A. Clavien* “Sources and prevention of graft infection during long-term ex situ liver perfusion,” *Transplant Infect. Dis.* **23**, e13623 (2021).
54. D. Eshmuminov[†], M.J. Schuler[†], D. Becker[†], L. Bautista Borrego, M. Mueller, C. Hagedorn, B. Stephanie, J. Steiger, M.W. Tibbitt, P. Dutkowski, P. Rudolf von Rohr, B. Stieger, M. Hefti *, and P.A. Clavien* “Bile formation in long-term ex situ perfused livers,” *Surgery* **169**, 894–902 (2021).
53. G. Bovone, O.Y. Dudaryeva, B. Marco-Dufort, and M.W. Tibbitt* “Engineering hydrogel adhesion for biomedical applications via chemical design of the junction,” *ACS Biomater. Sci. & Eng.* **7**, 4048–4076 (2021).
52. D. Becker*, D. Eshmuminov, R. Keller, M.J. Schuler, L. Bautista Borrego, C. Hagedorn, X. Muller, R. Graf, P. Dutkowski, M.W. Tibbitt, C. Onder, P.A. Clavien, and P. Rudolf von Rohr, M. Hefti “Automated insulin delivery – Continuous blood glucose control during ex situ liver perfusion,” *IEEE Trans. Biomed. Eng.* **68**, 1399–1408 (2021).
51. S. Bernhard and M.W. Tibbitt* “Supramolecular engineering of hydrogels for drug delivery” *Adv. Drug Deliv. Rev.* **171**, 240–256 (2021).
50. B. Marco-Dufort, J. Willi, F. Vielba Gomez, F. Gatti, and M.W. Tibbitt* “Environment controls biomolecule release from ideal dynamic covalent hydrogels” *Biomacromolecules* **22**, 146–157 (2021).
49. D. Eshmuminov, D. Becker, M. Hefti, M. Mueller, C. Hagedorn, P. Dutkowski, P. Rudolf von Rohr, M. Halbe, S. Segerer, M.W. Tibbitt, L. Bautista Borrego*, M.J. Schuler*, and P.A. Clavien* “Hyperoxia in portal vein causes enhanced vasoconstriction in arterial vascular bed,” *Sci. Rep.* **10**, 20966 (2020).
48. H. Ragelle, K. Dernick, S. Khemais, C. Keppler, L. Cousin, Y. Farouz, C. Louche, S. Fauser, S. Kustermann*, M.W. Tibbitt*, and P. Westenskow* “Human retinal microvasculature-on-a-chip for drug discovery,” *Adv. Healthc. Mater.* **9**, 2001531 (2020).
47. M.W. Tibbitt* “Bioprinting within live animals,” *Nat. Biomed. Eng.* **4**, 851–852 (2020). [non-peer-reviewed news & views highlight of “Intravital 3D bioprinting”]

46. E.A. Guzzi, H.R. Ragelle, and M.W. Tibbitt* “Surface tension-assisted additive manufacturing of tubular, multicomponent biomaterials,” in *Methods in Molecular Biology: Computer Aided Tissue Engineering*, edited by L. Moroni and A. Rainier (2020).
45. D. Deshmukh, N. Pasquero, G. Rathore, J. Zvick, O. Bar-Nur, J. Dual, and M.W. Tibbitt* “Screening method to identify hydrogel formulations that facilitate myotube formation from encapsulated primary myoblasts,” *Bioeng. Transl. Med.* **5**, e10181 (2020).
44. B. Marco-Dufort, R. Iten, and M.W. Tibbitt* “Linking molecular behavior to macroscopic properties in ideal dynamic covalent networks,” *J. Am. Chem. Soc.* **142**, 15371–15385 (2020).
43. R. Langer and M.W. Tibbitt “Robert Langer and Mark Tibbitt answer questions about additive manufacturing,” *Nat. Commun.* **11**, 3994 (2020). [non-peer-reviewed commentary]
42. E.A. Guzzi and M.W. Tibbitt* “Additive manufacturing of precision biomaterials,” *Adv. Mater.* **32**, 1901994 (2020).
41. D. Becker, M. Hefti, M.J. Schuler, L. Bautista Borrego, C. Hagedorn, X. Muller, R. Graf, P. Dutkowski, M.W. Tibbitt, C. Onder, P.A. Clavien, D. Eshmimunov*, and P. Rudolf von Rohr* “Model assisted analysis of the hepatic arterial buffer response during ex vivo porcine liver perfusion,” *IEEE Trans. Biomed. Eng.* **67**, 667–678 (2020).
40. S. Bernhard, G. Bovone, E.A. Guzzi, and M.W. Tibbitt* “Polymer–nanoparticle hydrogels,” *CHIMIA* **73**, 1034 (2019). [Polymers and Colloids Highlight]
39. G. Bovone, F. Steiner, E.A. Guzzi, and M.W. Tibbitt* “Automated and continuous production of polymeric nanoparticles,” *Front. Bioeng. Biotechnol.* **7**, 423 (2019).
38. E.A. Guzzi, G. Bovone, and M.W. Tibbitt* “Universal nanocarrier ink platform for biomaterials additive manufacturing,” *Small* **15**, 1905421 (2019).
37. O.S. Fenton, M.W. Tibbitt, E.A. Appel, S. Jhunjunwala, M.J. Webber, and R. Langer* “Injectable polymer–nanoparticle hydrogels for local immune cell recruitment,” *Biomacromolecules* **20**, 4430–4436 (2019).
36. G. Bovone, E.A. Guzzi, and M.W. Tibbitt* “Flow-based reactor design for the continuous production of polymeric nanoparticles,” *AIChE J.* **65**, e16840 (2019). [2019 Futures Issue]
35. P. Bertsch*, L. Schneider, G. Bovone, M.W. Tibbitt, P. Fischer*, and S. Gstöhl “Injectable biocompatible hydrogels from cellulose nanocrystals for locally targeted sustained release,” *ACS Appl. Mater. Interfaces* **11**, 38578–38585 (2019).
34. B. Marco-Dufort and M.W. Tibbitt* “Design of moldable hydrogels for biomedical applications using dynamic covalent boronic esters,” *Mater. Today Chem.* **12**, 16–33 (2019).
33. P. LeValley, M.W. Tibbitt, B. Noren, P. Kharkar, A.M. Kloxin, K.S. Anseth, M. Toner, and J. Oakey* “Immunofunctional photodegradable poly(ethylene glycol) hydrogel surfaces for the capture and release of rare cells,” *Colloids Surf., B* **174**, 483–492 (2019).
32. H. Huang, M.W. Tibbitt, T.Y. Huang, and B.J. Nelson* “Matryoshka-inspired micro-origami capsules to enhance drug loading, encapsulation, and transport of drugs,” *Soft Robotics* **6**, 150–159 (2019).
31. D.C. van der Valk[†], C.F.T. van der Ven[†], M.C. Blaser, J.M. Grolman, P.J. Wu, O.S. Fenton, L.H. Lee, M.W. Tibbitt, J. Andresen, J.R. Wen, A.H. Ha, S.C. Body, D.J. Mooney, A. van Mil, J.P.G. Sluijter, M. Aikawa, J. Hjortnaes, R. Langer, and E. Aikawa* “Engineering a 3D-bioprinted model of human heart valve disease using nanoindentation-based biomechanics,” *Nanomaterials* **8**, 296 (2018).
30. B.V. Sridhar, J.C. Janczy, Ø. Hatlevik, G. Wolfson, K.S. Anseth, and M.W. Tibbitt* “Thermal stabilization of biologics with photoresponsive hydrogels,” *Biomacromolecules* **19**, 740–747 (2018).

Publications from work performed at prior institutions (2009–2017)

29. H. Ragelle[†], M.W. Tibbitt[†], S.Y. Wu, M.A. Castillo, G.Z. Cheng, S.P. Gangadharan, D.G. Anderson, M.J. Cima, and R. Langer* “Surface tension-assisted additive manufacturing,” *Nat. Commun.* **9**, 1184 (2018).
28. O.S. Fenton, K.J. Kauffman, J.C. Kaczmarek, R.L. McClellan, S. Jhunjunwala, M.W. Tibbitt, M.D. Zeng, E.A. Appel, J.R. Dorkin, F.F. Mir, J.H. Yang, M.A. Oberli, M.W. Heartlein, F. DeRosa, R. Langer, and D.G. Anderson* “Synthesis and biological evaluation of ionizable lipid materials for the in vivo delivery of messenger RNA to B lymphocytes,” *Adv. Mater.* **29**, 1606944 (2017).
27. M.W. Tibbitt and R. Langer* “Living biomaterials,” *Acc. Chem. Res.* **50**, 508–513 (2017).
26. A. Detappe, E. Thomas, M.W. Tibbitt, S. Kunjachan, O. Zavidij, N. Parnandi, E. Reznichenko, F. Lux, O. Tillement and R. Berbeco* “Ultras-small silica-based bismuth gadolinium nanoparticles for

- dual magnetic resonance-computed tomography image guided radiation therapy,” *Nano Lett.* **17**, 1733–1740 (2017).
25. C.F.T. van der Ven, P.J. Wu, M.W. Tibbitt, A. van Mil, J.P.G. Sluijter, R. Langer, and E. Aikawa* “In vitro 3D model and miRNA drug delivery to target calcific aortic valve disease,” *Clin. Sci.* **131**, 181–195 (2017).
 24. A.C. Yu, H. Chen, D. Chan, G. Agmon, L.M. Stapleton, A.M. Sevit, M.W. Tibbitt, J.D. Acosta, T. Zhang, P.W. Franzia, R. Langer, and E.A. Appel* “Scalable manufacturing of biomimetic moldable hydrogels for industrial applications,” *Proc. Natl. Acad. Sci. U. S. A.* **113**, 14255–14260 (2016).
 23. M.W. Tibbitt, J.A. Shadish, and C.A. DeForest “Photopolymers for multiphoton lithography in biomaterials and hydrogels,” in *Multiphoton Lithography: Techniques, Materials, and Applications*, edited by J. Stampfl, R. Liska, and A. Ovsianikov, Weinheim: Wiley-VCH (2016).
 22. O.S. Fenton, K.J. Kauffman, R.L. McClellan, E.A. Appel, J.R. Dorkin, M.W. Tibbitt, M.W. Heartlein, F. DeRosa, R. Langer, and D.G. Anderson* “Bioinspired alkyl amino alcohol ionizable lipid materials for highly potent in vivo mRNA delivery,” *Adv. Mater.* **28**, 2939–2943 (2016).
 21. A.K. Patel, M.W. Tibbitt, A.D. Celiz, M.C. Davies, R. Langer, C. Denning, M.R. Alexander*, and D.G. Anderson* “High throughput screening for discovery of materials that control stem cell fate,” *Curr. Opin. Solid State Mater. Sci.* **20**, 202–211 (2016).
 20. M.W. Tibbitt, J.E. Dahlman, and R. Langer* “Emerging frontiers in drug delivery,” *J. Am. Chem. Soc.* **138**, 704–717 (2016).
 19. M.W. Tibbitt†, C.B. Rodell†, J.A. Burdick, and K.S. Anseth* “Progress in material design for biomedical applications,” *Proc. Natl. Acad. Sci. U. S. A.* **112**, 14444–14451 (2015).
 18. E.A. Appel, M.W. Tibbitt, J.M. Greer, O.S. Fenton, K. Kreuels, D.G. Anderson, and R. Langer* “Exploiting electrostatic interactions in polymer-nanoparticle hydrogels,” *ACS Macro Lett.* **4**, 848–852 (2015).
 17. K.J.R. Lewis, M.W. Tibbitt, Y. Zhao, K. Branchfield, X. Sun, V. Balasubramaniam, and K.S. Anseth* “In vitro model alveoli from photodegradable microsphere templates,” *Biomater. Sci.* **3**, 821–832 (2015).
 16. E.A. Appel†, M.W. Tibbitt†, M.J. Webber, B.A. Mattix, O. Veiseh, and R. Langer* “Self-assembled hydrogels utilizing polymer-nanoparticle interactions,” *Nat. Commun.* **6**, 6095 (2015).
 15. C. Yang†, M.W. Tibbitt†, L. Basta, and K.S. Anseth* “Mechanical memory and dosing influence stem cell fate,” *Nat. Mater.* **13**, 645–652 (2014).
 14. H. Wang, M.W. Tibbitt, S.J. Langer, L.A. Leinwand, and K.S. Anseth* “Hydrogels preserve native phenotypes of valvular fibroblasts through an elasticity-regulated PI3K/AKT pathway,” *Proc. Natl. Acad. Sci. U. S. A.* **110**, 19336–19341 (2013).
 13. M.W. Tibbitt, L.A. Sawicki, A.M. Kloxin, and K.S. Anseth* “Mechanical properties and degradation of chain and step-polymerized photodegradable hydrogels,” *Macromolecules* **46**, 2785–2792 (2013).
 12. R. Shenoy, M.W. Tibbitt, K.S. Anseth, and C.N. Bowman* “Formation of core-shell particles by interfacial radical polymerization initiated by a glucose oxidase-mediated redox system,” *Chem. Mater.* **25**, 761–767 (2013).
 11. M.W. Tibbitt, A.M. Kloxin, and K.S. Anseth* “Modeling controlled photodegradation in optically thick hydrogels,” *J. Polym. Sci., Part A: Polym. Chem.* **51**, 1899–1911 (2013).
 10. M.W. Tibbitt and K.S. Anseth* “Dynamic microenvironments: the fourth dimension,” *Sci. Transl. Med.* **14**, 160ps24 (2012).
 9. A.M. Kloxin, K.J. Lewis, C.A. DeForest, G. Seersdorf, M.W. Tibbitt, V. Balasubramaniam, and K.S. Anseth* “Responsive culture platform to examine the influence of microenvironmental geometry on cell function,” *Integ. Biol.* **4**, 1540–1549 (2012).
 8. Q. Guo, X. Wang, M.W. Tibbitt, K.S. Anseth, D.J. Montell*, and J.H. Elisseeff* “Light activated cell migration in synthetic extracellular matrices,” *Biomaterials* **33**, 8040–8046 (2012).
 7. M.A. Azagarsamy, D.L. Alge, S.J. Radakrishnan, M.W. Tibbitt, and K.S. Anseth* “Photocontrolled nanoparticles for on-demand release of proteins,” *Biomacromolecules* **13**, 2219–2224 (2012).
 6. M.W. Tibbitt, B.W. Han, A.M. Kloxin, and K.S. Anseth* “Synthesis and application of photodegradable microspheres for spatiotemporal control of protein delivery,” *J. Biomed. Mater. Res. A* **100**, 1647–1654 (2012).
 5. A.M. Kloxin, M.W. Tibbitt, and K.S. Anseth* “Synthesis of photodegradable hydrogels as dynamically tunable cell culture platforms,” *Nat. Protoc.* **5**, 1867–1887 (2010).

4. M.W. Tibbitt, K.U. Dyamenahalli, A.M. Kloxin, and K.S. Anseth* “Controlled two-photon photodegradation of PEG hydrogels to study and manipulate subcellular interactions on soft materials,” *Soft Matter* **6**, 5100–5108 (2010).
3. A.M. Kloxin, M.W. Tibbitt, A.M. Kasko, J.A. Fairbairn, and K.S. Anseth* “Tunable hydrogels for external manipulation of cellular microenvironments through controlled photodegradation,” *Adv. Mater.* **22**, 61–66 (2010).
2. M.W. Tibbitt and K.S. Anseth* “Hydrogels as extracellular matrix mimics for 3D cell culture,” *Biotechnol. Bioeng.* **103**, 655–663 (2009).
1. A.A. Aimetti, M.W. Tibbitt, and K.S. Anseth* “Human neutrophil elastase responsive delivery from poly(ethylene glycol) hydrogels,” *Biomacromolecules* **10**, 1484–1489 (2009).

Patents

9. D. Deshmukh, E. Vuille-dit-Bille, S. Heub, G. Weder, J. Dual, M.W. Tibbitt *Provisional filed*.
8. T. Edwardson, Y. Ota, M. Hori, D. Dranseikiene, E. Guzzi, Z. Ragus, C. Peters, M.W. Tibbitt, D. Hilvert *Provisional filed*.
7. D. Deshmukh, P. Reichert, M.W. Tibbitt, J. Dual. *Provisional filed*.
6. E.A. Guzzi, M.W. Tibbitt. *Provisional filed*. [**Spark Award Finalist 2020**]
5. B. Marco-Dufort, M.W. Tibbitt, B.V. Sridhar, J.A. Janczy, D. Busha, M. Best. Dynamic covalently linked hydrogels as stabilization network platforms. WO 2020/181114 A1
4. B.V. Sridhar, M.W. Tibbitt, Ø. Hatlevik, J.W. Heaps, J.A. Janczy. Photolabile compositions as a stabilization platform. WO 2017/210009 A1
3. E.A. Appel, M.W. Tibbitt, R. Langer. Shear-thinning self-healing networks. US 11,045,429 B2
2. M.W. Tibbitt, K.S. Anseth, A.M. Kloxin, M. Toner, J. Oakey, A. Shah. Selective capture and release of rare mammalian cells using photodegradable hydrogels in a microfluidic platform. US 11,262,361 B2
1. K.S. Anseth, A.M. Kasko, M.W. Tibbitt, A.M. Kloxin, B.V. Sridhar. Photodegradable groups for tunable polymeric materials. US 9,180,196 B2

Invited Presentations and Seminars

46. “Macromolecular engineering of dynamic biomaterials”
invited talk at *Swiss Soft Days*; Fribourg, CH; April 2023.
45. “Macromolecular engineering of dynamic biomaterials”
invited talk at *Macromolecular Colloquium Freiburg 2023*; Freiburg, DE; February 2023.
44. “Engineering strategies to maintain, monitor, and repair damaged livers”
invited talk at *HPB Liver Retreat*; Grindelwald, CH; February 2023.
43. “Nanomaterials as building blocks in advanced biomaterials design”
invited talk at *SFNANO 2022*; Strasbourg, FR; December 2022.
42. “Nanomaterials as building blocks in advanced biomaterials design”
invited talk at *MRS 2022*; Boston, USA; November 2022.
41. “Reversible polymer networks for advanced biomaterial design”
invited talk at *Biointerfaces International Conference 2022 Zurich*; Zurich, CH; September 2022.
40. “Hydrogel design in bioprinting”
invited lecture at *University of Utrecht Bioprinting Summer School*; Utrecht, NL; July 2022.
39. “Nano-engineered biomaterials”
invited talk at *Plenary Days of CNRS GdR B2i*; Dijon, FR; June 2022.
38. “The extent of 3D confinement regulates stem cell fate”
invited talk at *IUPESM World Congress on Medical Physics and Biomedical Engineering*; Singapore, SG; June 2022.
37. “Macromolecular engineering of responsive biomaterials”
invited seminar (virtual) at the Department of Chemical & Petroleum Engineering, University of Wyoming; Laramie, WY; November 2020.
36. “Linking molecular behavior to macroscopic properties in ideal dynamic covalent networks”

- invited** lecture (virtual) at the *MRS 2020*; Boston, MA; November 2020.
35. “Linking molecular behavior to macroscopic properties in ideal dynamic covalent networks”
invited lecture at the *SIMM Lab at the ESPCI*; Paris, FR; September 2020.
 34. “Engineered hydrogels and additive manufacturing for tissue engineering applications”
invited seminar (webinar) at *MaP Distinguished AM Seminar Series*; Zurich, CH; April 2020.
 33. “Engineered hydrogels and additive manufacturing for tissue engineering applications”
invited talk at *TEDD Sino-Swiss Symposium*; Wädenswil, CH; October 2019.
 32. “Engineered ECM mimics to investigate skin biology”
invited talk at *SKINTEGRITY retreat*; Thurgau, Switzerland; July 2019.
 31. “Biomaterials engineering for biofabrication and additive manufacturing”
invited talk at *SelectBio*; Rotterdam, NL; June 2019.
 30. “Responsive biomaterials as drug delivery technologies”
invited talk at *Swiss Medtech Day*; Bern, CH; June 2019.
 29. “Macromolecular engineering of advanced biomaterials for cell mechanobiology and drug delivery”
invited seminar at *D-BSSE, ETH Zurich*; Basel, CH; April 2019.
 28. “Macromolecular engineering of advanced biomaterials for cell mechanobiology and drug delivery”
invited seminar at *D-HEST, ETH Zurich*; Zurich, CH; February 2019.
 27. “Macromolecular engineering for nanoformulation and biocatalysis”
invited seminar at *DSM Sisseln*; Sisseln, CH; February 2019.
 26. “Photoresponsive hydrogels to investigate dynamic cell-matrix interactions and cellular mechanical memory”
invited talk at *Jülich Soft Matter Days 2018*; Jülich, DE; November 2018.
 25. “Photoresponsive hydrogels to investigate dynamic cell-matrix interactions and cellular mechanical memory”
invited lecture at *ETH EMatrix Summer School*; Zurich, CH; September 2018.
 24. “Macromolecular engineering of advanced (bio)materials,”
invited seminar at *Novartis Research Campus*; Basel, CH; June 2018.
 23. “Macromolecular engineering of responsive hydrogels,”
invited talk at *8th International Symposium on Polymer Chemistry*; Changchun, CN; June 2018.
 22. “Mechanical memory directs cell fate,”
invited keynote at *Nanoengineering for Mechanobiology*; Camogli, IT; March 2018.
 21. “Macromolecular engineering of hydrogel biomaterials,”
invited seminar at the *Chemistry, Materials, and Chemical Engineering “Giulio Natta” Department of the Politecnico di Milano*; Milan, IT; January 2018.
 20. “Self-assembled hydrogels from polymer-nanoparticle interactions,”
invited keynote at *Soft Matter Interfaces*; Monte Verità, CH; November 2017.
 19. “Macromolecular engineering of responsive biomaterials,”
invited seminar at the *Institute for Chemical and Bioengineering at ETH Zurich*; Zurich, CH; November 2017.
 18. “Macromolecular engineering of advanced biomaterials,”
Einführungsvorlesung at *ETH Zurich*; Zurich, CH; October 2017.
 17. “Macromolecular design of responsive biomaterials,”
invited seminar at the *Institute of Materials Sci. and Technol. of TU Wien*; Vienna, AU; July 2017.
 16. “Hydrogels: key principles and applications in ocular drug delivery,”
invited talk at the *ARVO Annual Meeting*; Baltimore, USA; May 2017.
 15. “Assisted development: model homes for cells and tissues,”
invited seminar at the *Koch Institute for Integrative Cancer Research of MIT*; Cambridge, USA; February 2017.
 14. “Eliminating the need for refrigerated transport,”
invited talk at *TTI/Vanguard [next]:2016*; San Francisco, USA, December 2016.
 13. “Emerging materials to understand and treat cardiac valve pathologies,”
invited talk at *Heart Valve-Related Disorders*; Cambridge, UK; July 2016.

12. “Macromolecular engineering of advanced biomaterials,”
invited seminar at the *Institute of Process Engineering of ETH Zurich*; Zurich, Switzerland; March 2016.
11. “Macromolecular engineering of advanced biomaterials for tissue engineering and drug delivery,”
invited seminar at the *Division of Molecular Pharmaceutics of the University of North Carolina*; Chapel Hill, USA; March 2016.
10. “Macromolecular engineering of advanced biomaterials,”
invited seminar at the *Department of Chemical Engineering of Stanford University*; Palo Alto, USA; March 2016.
9. “Macromolecular engineering of advanced biomaterials,”
invited seminar at the *Department of Chemical Engineering of Auburn University*; Auburn, USA; February 2016.
8. “Macromolecular engineering of advanced biomaterials,”
invited seminar at the *Department of Chemical and Biological Engineering of Northwestern University*; Evanston, USA; February 2016.
7. “Macromolecular engineering of advanced biomaterials,”
invited seminar at the *Department of Chemical and Biological Engineering of Iowa State University*; Ames, USA; January 2016.
6. “Macromolecular engineering of advanced biomaterials,”
invited seminar at the *Department of Chemical Engineering of the University of Michigan*; Ann Arbor, USA; January 2016.
5. “Responsive hydrogels for cell culture and drug delivery,”
invited seminar at the *Squishy Physics Seminar of Harvard University*; Cambridge, USA; September 2015.
4. “Macromolecular engineering of responsive materials,”
invited seminar at the *Koch Institute for Integrative Cancer Research of MIT*; Cambridge, USA; April 2015.
3. “Valve cell response to substrate stiffness: molecular pathways; does stiffness beget stiffness, as MR begets MR?” **invited** talk at the *Leducq TransAtlantic Network*; London, UK; December 2013.
2. “Fundamental characterization of photodegradable hydrogels: spatiotemporal control of the cellular microenvironment,” **invited** award lecture at *Engineering Life 2013*; Dresden, DE; September 2013.
1. “Photodegradable PEG-based hydrogels: dynamic control of the cellular microenvironment,”
invited seminar at the *Department of Chemical and Petroleum Engineering of the University of Wyoming*; Laramie, USA; December 2012.

Researchers mentored

Doctoral students

Current

18. Jonas Binz
Research: Engineered electronic skin
17. Yifan Cui 2022–
Research: Fabrication and application of engineered living materials
16. Leslie Cunningham 2021–
Research: Molecular strategies to drive liver regeneration during ex situ perfusion
15. Florian Huwyler 2021–
Research: Perfusion strategies to drive liver regeneration during ex situ perfusion
14. Morris Wolf 2021–
Research: Photoreversible coatings in industrial and biomedical applications
13. Alexandros Atzemoglu, external student at SuSoS AG (MSCA ITN Surface) 2021–
Research: Polymeric binders based on azide-functionalized aromatics
12. Tobias Komsthöft, external student at SuSoS AG (MSCA ITN Dirnano) 2021–
Research: Tailored polymer coatings of immunomodulatory nanoparticles
11. Dalia Dranseikiene 2021–
Research: Templating biological structures with biomaterials design

10. Lucien Cousin 2020–
Research: Physics and engineering of associating polymer networks
9. Lorenza Garau Paganella, joint with Prof. Dr. Edoardo Mazza 2020–
Research: 3D tissue mimics to understand skin cell biology
8. Stéphane Bernhard 2019–
Research: Supramolecular design of moldable hydrogels
- Completed*
7. Börte Emiroglu, joint with Prof. Dr. Andrew DeMello 2018–2023
Research: Modular assembly of granular soft materials from microgel building blocks
Defense date: 24.05.2023
Current position: Postdoctoral fellow, ETH Zurich, CH
6. Dhananjay Deshmukh, joint with Prof. Dr. Jürg Dual 2018–2023
Research: Acoustophoretic manipulation of cells for spatially controlled tissue engineering
Defense date: 17.04.2023
Current position: Postdoctoral fellow, ETH Zurich, CH
5. Lisa Krattiger, external doctoral student with Dr. Martin Ehrbar, USZ 2018–2022
Research: Vascular tissue engineering; microgel synthesis and application
Defense date: 15.11.2022
Current position: Postdoctoral fellow, USZ, CH
4. Giovanni Bovone 2018–2022
Research: Engineered nanoparticle-based materials for controlled drug delivery
Defense date: 21.09.2022
Current position: Postdoctoral fellow, Harvard University, USA
3. Bruno Marco-Dufort 2017–2022
Research: Design and application of dynamic covalent networks
Defense date: 23.08.2022
Current position: Junior Venture Builder, Maximon, CH
2. Dr. Oksana Dudaryeva 2017–2022
Thesis Title: Engineering Structured Synthetic Cell Microenvironments for Cell Function Investigation
Defense date: 01.06.2022
Current position: Postdoctoral research fellow, University of Utrecht, NL
1. Dr. Elia Guzzi 2017–2022
Thesis Title: Engineering of Biomaterials for Additive Manufacturing in Precision Medicine
Defense date: 03.05.2022
Current position: Postdoctoral research fellow, ETH Zurich; Co-founder, InkVivo

Postdoctoral fellows

Current

7. Dr. Börte Emiroglu 2023–
Research: Bioactive granular hydrogels
6. Dr. Dhananjay Deshmukh 2023–
Research: Acoustic alignment of microtissues for efficient histology
5. Dr. Stefan Mommer 2022–
Research: Slide-ring polymer networks
4. Dr. Elia Guzzi 2020–
Research: Additive manufacturing of advanced drug delivery systems
3. Dr. Céline Labouesse 2018–
Research: Dynamic biomaterials for dermal fibroblast and neural stem cell mechanobiology

Former

2. Dr. Max Hefti (Liver4Life Project Lead)
Research: Normothermic machine perfusion, liver perfusion and regeneration
1. Dr. Dustin Becker 2018–2021
Research: Normothermic machine perfusion, liver perfusion

Thesis co-examiner

28. Borut Lampret; ICL, UK	13.02.2023
27. Malak Alaa Eddine; ESPCI, FR	31.01.2023
26. Marco Binelli; D-MATL, ETH Zurich, CH	31.08.2022
25. Eva Kurisinkal; EPFL, CH	21.07.2022
24. Nicole Aegerter; D-MAVT, ETH Zurich, CH	18.07.2022
23. Manon Rolland; D-MATL, ETH Zurich, CH	04.07.2022
22. Kun Jiang; KTH, SE	14.03.2022
21. Philipp Fisch; D-HEST, ETH Zurich, CH	02.02.2022
20. Philipp Antowiak; D-CHAB, ETH Zurich, CH	10.11.2021
19. Simone Giaveri; EPFL, CH	11.05.2021
18. Francesca Pramotton; D-MAVT, ETH Zurich, CH	14.12.2020
17. Casper van der Ven; Utrecht University, NL	10.11.2020
16. Nathaporn Klubthawee; Thammasat University, TH	06.10.2020
15. Julia Gerber; D-MAVT, ETH Zurich, CH	19.06.2020
14. Ya Wang; EPFL, CH	03.04.2020
13. Aaron Christopher Schmidt; D-CHAB, ETH Zurich, CH	29.01.2020
12. Pawel M. Orlewski; D-MAVT, ETH Zurich, CH	28.01.2020
11. Dustin Becker; D-MAVT, ETH Zurich, CH	28.11.2019
10. Áron Horváth; D-HEST, ETH Zurich, CH	19.08.2019
9. Gabriele Colombo; D-MATL, ETH Zurich, CH	28.06.2019
8. Elena Cândida Dos Santos; D-MAVT, ETH Zurich, CH	25.06.2019
7. Marcel Lorenz; D-CHAB, ETH Zurich, CH	27.02.2019
6. Stefano Caimi; D-CHAB, ETH Zurich, CH	24.10.2018
5. Ian Valera de Albuquerque; D-MAVT, ETH Zurich, CH	12.07.2018
4. Nicolas Broguiere; D-HEST, ETH Zurich, CH	06.07.2018
3. Peter Fleckenstein; D-CHAB, ETH Zurich, CH	04.04.2018
2. Emanuele Mauri; Politecnico di Milano, IT	19.01.2018
1. Yannick Devaud; EPFL, CH	20.11.2017

Teaching

Spring semester 2023	Bioengineering 151-0908-00L, 4 ECTS	ETH Zurich, CH
Spring semesters 2018–2022	Macromolecular Engineering: Network and Gels 151-0946-00L, 4 ECTS	ETH Zurich, CH
Autumn semesters 2018–2021	Practica in Process Engineering I 151-0957-00L, 2 ECTS (25% contribution)	ETH Zurich, CH
Autumn semesters 2019–2021	Experimental Methods for Engineers 151-0123-00L, 4 ECTS (13% contribution)	ETH Zurich, CH

Guest lectures

- **Mechanobiology**
D-HEST; ETH Zurich, CH
Spring semesters
2018–2020
- **Frontiers in Nanotechnology**
D-HEST; ETH Zurich, CH
Autumn semesters
2020–2022

Service

Conference organization

2022	Symposium co-organizer, “Hydrogels for the Human Machine Interface”; MRS Fall Meeting; Boston, USA
2022	26 th Swiss Society for Biomaterials and Regenerative Medicine (SSB+RM) Annual Meeting; Zurich, CH
2021	AICHe Session Chair, “Biomaterials Graduate Student Award Symposium”; [virtual because of Covid-19]

2020 Symposium Organizer, “Regenerative Engineering and Synthetic Biology”; MRS Fall Meeting; Boston, MA [virtual because of Covid-19]
 2020 AIChE session co-chair, “Biomaterials and Life Sciences Engineering: Faculty Candidates”; San Francisco, USA [virtual because of Covid-19]
 2020 Symposium co-organizer, “Supramolecular Nanomaterials”; 11th World Biomaterials Congress; Glasgow, GB [virtual, postponed to December 2020 because of Covid-19]
 2019 AIChE session co-chair, “Biomaterials and Life Sciences Engineering: Faculty Candidates I & II”; Orlando, USA
 2018 Co-organizer for Anseth Symposium in honor of Kristi S. Anseth’s 50th Birthday
 2018 AIChE session co-chair, “Hydrogel Biomaterials”; Pittsburgh, USA
 2018 Abstract Reviewer for ACS PMSE, “Eastman Award Competition in Applied Polymer Science”; American Chemical Society, USA
 2017– AIChE session co-chair, “Hydrogel Biomaterials”; Minneapolis, USA

Proposal reviewer

2021 *Ad hoc* reviewer for the Dutch Research Council; NL
 2021 *Ad hoc* reviewer for the Pancreatic Cancer UK; UK
 2020 *Ad hoc* reviewer for the Binational Science Foundation; USA/IL
 2020 *Ad hoc* reviewer for ETH Foundation; CH
 2019 *Ad hoc* reviewer for Honk Kong Innovation and Technology Commission; HK
 2018 *Ad hoc* reviewer for National Science Center; PO
 2018– *Ad hoc* reviewer for Associazione Italiana Sclerosi Multipla; IT
 2018– *Ad hoc* reviewer for Agence Nationale de Recherche; FR
 2018 *Ad hoc* reviewer for LEaDing Fellow Postdoc Programme; TU Delft, NL
 2016– *Ad hoc* reviewer for Graduate Women in Science National Fellowships; USA

Journal reviewer (>25 journals) including

ACS Applied Materials and Interfaces, ACS Macro Letters, Acta Biomaterialia, Advanced Functional Materials, Advanced Healthcare Materials, Advanced Materials, Angewandte Chemie International Edition, Biomacromolecules, Biomaterials Science, Chemistry of Materials, Journal of the American Chemical Society, Journal of Controlled Release, Journal of Mechanical Behavior of Biomedical Materials, Macromolecular Bioscience, Macromolecules, Materials Horizon, Nature Biomedical Engineering, Nature Communications, Nature Materials, Science Advances, Soft Matter

ETH Zurich

University level

2023 Food Engineering for Nutrition Faculty Search Committee (D-HEST)
 2022 Tissue Damage and Repair Faculty Search Committee (D-BIOL)
 2021– Didactic Fellow [co-teacher for pedagogical development at ETH Zurich]
 2021– Co-lead and Executive Board member of ALIVE research consortium
 2020 rETHink Track II: Professoren (provided input from tenure-track perspective)
 2018–2019 ETH Futures Dialogue and Long-Range Radar Participant – Engineering with Living Materials
 2018 MaP Award Jury Member; Materials and Processes Graduate Symposium

Departmental level

2022– D-MAVT WG Diversity
 2019–2020 D-MAVT WG Space
 2018–2019 Open Profile Faculty Search Committee
 2018–2019 D-MAVT Strategy Commission
 2018–2019 “P” Cluster Faculty Search Committee

Scientific Outreach (from time at ETH Zurich)

2019–2020 Science and (You)th
 2019, 2021–2022 Scientifica, “How new soft materials can benefit human health.”
 2019 Kangaru Goes Science
 2017– Gymnasium student visit lab tours
 2017– Studieninformationstage