



Wei Li (Dr.-Ing.)  
Postdoctoral Researcher  
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## Wei Li (李威)

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Gender: male Date of Birth: June 1986 Place of Birth: Hubei, China Citizenship: Chinese

### WORK EXPERIENCE

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- 2016 – Present **Postdoctoral researcher** Supervisor: **Prof. Hélder A. Santos**  
Faculty of Pharmacy, University of Helsinki, Finland  
Project: Multistage-Multifunctional Porous Silicon Nanovectors for Directed Theranostics
- 2015 – 2016 **Postdoctoral researcher** Supervisors: **Prof. Mart Saarma**  
(**Marie Skłodowska-Curie Action Fellowship**) **Prof. Hélder A. Santos**  
Institute of Biotechnology & Faculty of Pharmacy, University of Helsinki, Finland  
Research topic: GDNF mimetics delivery by porous silicon nanoparticles for improved Parkinson's disease management

### EDUCATION

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- 2011 – 2015 **Doctor of Engineering** Supervisor: **Prof. Aldo R. Boccaccini**  
Graduation date: 29 July 2015 | **Mark: very good**  
Institute of Biomaterials, Department of Materials Science and Engineering  
**University of Erlangen-Nuremberg, Germany**  
Research topic: Bioactive glass-based composite scaffolds with controlled drug delivery for bone tissue engineering
- 2008 – 2011 **Master of Engineering** Supervisor: Prof. Jianfeng Yang  
Department of Materials Science and Engineering  
**Xi'an Jiaotong University (XJTU), China**  
Grades: 84.3/100 | Master study fully funded by "Innovation Fund of XJTU"
- 2004 – 2008 **Bachelor of Engineering**  
Department of Materials Science and Engineering  
**Xi'an Jiaotong University, China**  
Grades: Overall 87/100 | **Major 91/100** | Bachelor Thesis: **A level (Excellent)**



## RESEARCH INTERESTS

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Biomaterials; tissue engineering; drug delivery; nanomedicine; microfluidics

## SUPERVISION & TEACHING

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2017 Supervision of **master thesis** (Erasmus exchange student)  
2016 Teaching in **Laboratory Course** in Pharmaceutical Technology  
2014 Supervision of **bachelor thesis** (Medical engineering) for 2 times  
2013 – 2015 Supervision of bachelor student for **English Seminar Presentations** for 3 times  
2012 Supervision of **master mini project (Elite Masters Programme in Germany)**  
2012 – 2015 Supervision of **national and international internship** for 4 times  
2012 – 2017 Invigilation of examination (4 times)

## AWARDS & HONORS

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2015 "**Top 25 Hottest Articles**" on *Journal of the European Ceramic Society* for the full year 2014  
(awarded by Elsevier)  
2010 The Honor of **Excellent Graduate Student**  
2007 **National Scholarship** of Encouragement (**Top 4%**)  
2006 The Honor of **Model Student** in Social Activities  
2005 – 2007 The Honor of **Excellent Student** (3 times)  
2005 – 2006 Siyuan Scholarship (2 times)  
2005 Siyuan Freshmen Scholarship

## GRANTS & FUNDINGS

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2017	Orion Research Foundation <b>Postdoctoral Research Grant</b>	24,000 €
	Project: Oral Delivery of GDNF Mimetics for Parkinson's Disease Treatment	
2014	German Society for Biomaterials Travel Grant	500 € (2 students awarded)
2013	KMM-VIN Research Fellowship	3,000 €
2008 – 2010	Innovation Fund for Graduate Student (3 times)	

## JOURNAL REFEREE

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BioMed Research International	Biomedical Glasses
Journal of Colloid and Interface Science	Journal of Materials Science Materials in Medicine
Journal of Non-Crystalline Solids	Journal of the Mechanical Behavior of Biomedical Materials
Journal of Porous Materials	Materials Letters



Materials Science and Engineering C

PLOS ONE

## CONFERENCES & SEMINARS

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- 2016      **Oral presentation** in ChinaNanomedicine 2016, Wuhan, China
- 2014      **Oral presentation** in European Society for Biomaterials (ESB) conference, Liverpool, UK
- 2014      Poster presentation in 2nd KMM-VIN Industrial Workshop, Bremen, Germany
- 2014      Oral presentation in NBBA seminar, Erlangen, Germany
- 2012      Poster presentation in NBBA seminar, Erlangen, Germany
- 2012      Attended 3rd International Conference "Strategies in Tissue Engineering", Würzburg, Germany

## OTHER ACTIVITIES

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- 2013      Visiting student at Vienna University of Technology, Vienna, Austria  
(2 months **fully funded by KMM-VIN**)

## PUBLICATIONS

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### Journal articles :

1. Macías-Andrés VI, **Li W (co-first author)**, Aguilar-Reyes EA, Ding Y, Roether JA, Harhaus L, et al. Preparation and characterization of 45S5 bioactive glass-based scaffolds loaded with PHBV microspheres with daidzein release function. *Journal of Biomedical Materials Research: Part A*. 2017. DOI: 10.1002/jbm.a.36046. Accepted.
2. **Li W**, Liu D, Zhang H, Correia A, Mäkilä E, Salonen J, et al. Microfluidic assembly of a nano-in-micro dual drug delivery platform composed of halloysite nanotubes and a pH-responsive polymer for colon cancer therapy. *Acta Biomaterialia*. 2016;48:238-46.
3. Liu D, Bernuz CR, Fan J, **Li W**, Correia A, Hirvonen J, et al. A Nano-in-Nano Vector: Merging the Best of Polymeric Nanoparticles and Drug Nanocrystals. *Advanced Functional Materials*. DOI: 10.1002/adfm.201604508. In press.
4. Sarker B, **Li W**, Zheng K, Detsch R, Boccaccini AR. Designing porous bone tissue engineering scaffolds with enhanced mechanical properties from composite hydrogels composed of modified alginate, gelatin, and bioactive glass. *ACS Biomaterials Science & Engineering*. 2016;2:2240-54.
5. **Li W**, Jan Z, Ding Y, Liu Y, Janko C, Pischetsrieder M, et al. Facile preparation of multifunctional superparamagnetic PHBV microspheres containing SPIONs for biomedical applications. *Scientific Reports*. 2016;6:23140.



6. Chen Q, **Li W (co-first author)**, Yao Q, Liang R, Perez-Garcia R, Munoz J, et al. Biodegradable and multilayered drug delivery coatings composed of daidzein-loaded PHBV microspheres embedded in polymer matrix by electrophoretic deposition. *Journal of Materials Chemistry B*. 2016;4:5035-45.
7. Ding Y, **Li W**, Müller T, Schubert DW, Boccaccini AR, Yao Q, et al. Electrospun polyhydroxybutyrate/poly ( $\epsilon$ -caprolactone)/58S sol-gel bioactive glass hybrid scaffolds with highly improved osteogenic potential for bone tissue engineering. *ACS Applied Materials & Interfaces*. 2016;8:17098-108.
8. Westhauser F, Weis C, Prokscha M, Bittrich LA, **Li W**, Xiao K, et al. Three-dimensional polymer coated 45S5-type bioactive glass scaffolds seeded with human mesenchymal stem cells show bone formation in vivo. *Journal of Materials Science: Materials in Medicine*. 2016;27:1-7.
9. **Li W**, Ding Y, Yu S, Yao Q, Boccaccini AR. Multifunctional chitosan-45S5 bioactive glass-poly(3-hydroxybutyrate-co-3-hydroxyvalerate) microsphere composite membranes for guided tissue/bone regeneration. *ACS Applied Materials & Interfaces*. 2015;7:20845-54.
10. **Li W**, Wang H, Ding Y, Scheithauer EC, Goudouri O-M, Gruenewald A, et al. Antibacterial 45S5 Bioglass<sup>®</sup>-based scaffolds reinforced with genipin cross-linked gelatin for bone tissue engineering. *Journal of Materials Chemistry B*. 2015;3:3367-78.
11. Scheithauer EC, **Li W (corresponding author)**, Ding Y, Roether JA, Boccaccini AR. Preparation and characterization of electrosprayed daidzein-loaded PHBV microspheres. *Materials Letters*. 2015;158:66-9.
12. Chen Q, **Li W**, Goudouri O-M, Ding Y, Cabanas-Polo S, Boccaccini AR. Electrophoretic deposition of antibiotic loaded PHBV microsphere-alginate composite coating with controlled delivery potential. *Colloids and Surfaces B: Biointerfaces*. 2015;130:199-206.
13. Yao Q, **Li W**, Yu S, Ma L, Jin D, Boccaccini AR, et al. Multifunctional chitosan/polyvinyl pyrrolidone/45S5 Bioglass<sup>®</sup> scaffolds for MC3T3-E1 cell stimulation and drug release. *Materials Science and Engineering: C*. 2015;56:473-80.
14. Locs J, **Li W**, Sokolova M, Roether JA, Loca D, Boccaccini AR. Zoledronic acid impregnated and poly (L-lactic acid) coated 45S5 Bioglass<sup>®</sup>-based scaffolds. *Materials Letters*. 2015;156:180-2.
15. Ding Y, Yao Q, **Li W**, Schubert DW, Boccaccini AR, Roether JA. The evaluation of physical properties and in vitro cell behavior of PHB/PCL/sol-gel derived silica hybrid scaffolds and PHB/PCL/fumed silica composite scaffolds. *Colloids and Surfaces B: Biointerfaces*. 2015;136:93-8.
16. Naseri S, Lepry WC, **Li W**, Waters KE, Boccaccini AR, Nazhat SN. 45S5 bioactive glass reactivity by dynamic vapour sorption. *Journal of Non-Crystalline Solids*. 2015;432:47-52.



17. Zheng K, Solodovnyk A, **Li W**, Goudouri O-M, Stähli C, Nazhat SN, et al. Aging time and temperature effects on the structure and bioactivity of gel-derived 45S5 glass-ceramics. *Journal of the American Ceramic Society*. 2015;98:30-8.
18. Zheng K, Bortuzzo JA, Liu Y, **Li W**, Pischetsrieder M, Roether J, et al. Bio-templated bioactive glass particles with hierarchical macro-nano porous structure and drug delivery capability. *Colloids and Surfaces B: Biointerfaces*. 2015;135:825-32.
19. **Li W**, Garmendia N, Perez de Larraya U, Ding Y, Detsch R, Gruenewald A, et al. 45S5 bioactive glass-based scaffolds coated with cellulose nanowhiskers for bone tissue engineering. *RSC Advances*. 2014;4:56156-64.
20. **Li W**, Pastrama M-I, Ding Y, Zheng K, Hellmich C, Boccaccini AR. Ultrasonic elasticity determination of 45S5 Bioglass®-based scaffolds: Influence of polymer coating and crosslinking treatment. *Journal of the Mechanical Behavior of Biomedical Materials*. 2014;40:85-94.
21. **Li W**, Ding Y, Rai R, Roether JA, Schubert DW, Boccaccini AR. Preparation and characterization of PHBV microsphere/45S5 bioactive glass composite scaffolds with vancomycin releasing function. *Materials Science and Engineering: C*. 2014;41:320-8.
22. **Li W**, Noeaid P, Roether JA, Schubert DW, Boccaccini AR. Preparation and characterization of vancomycin releasing PHBV coated 45S5 Bioglass®-based glass–ceramic scaffolds for bone tissue engineering. *Journal of the European Ceramic Society*. 2014;34:505-14. ("Top 25 Hottest Articles" on *Journal of the European Ceramic Society* for the full year 2014)
23. Noeaid P, **Li W**, Roether JA, Mouriño V, Goudouri O-M, Schubert DW, et al. Development of bioactive glass based scaffolds for controlled antibiotic release in bone tissue engineering via biodegradable polymer layered coating. *Biointerphases*. 2014;9:041001.
24. Desimone D, **Li W**, Roether JA, Schubert DW, Crovace MC, Rodrigues ACM, et al. Biosilicate® –gelatine bone scaffolds by the foam replica technique: development and characterization. *Science and Technology of Advanced Materials*. 2013;14:045008.

**Book chapters:**

1. **Li W**, Boccaccini AR. Bioactive glasses: traditional and prospective applications in healthcare. Hot Topics in Biomaterials: Future Science Ltd; 2014. p. 56-68.
2. Mouriño V, Cattalini JP, **Li W**, Boccaccini AR, Lucangioli S. 22 - Multifunctional scaffolds for bone tissue engineering and in situ drug delivery. In: Boccaccini AR, Ma PX, editors. *Tissue Engineering Using Ceramics and Polymers (Second Edition)*: Woodhead Publishing; 2014. p. 648-75.



3. Ding Y, Souza MT, Li W, Schubert DW, Boccaccini AR, Roether JA. Bioactive glass - biopolymer composites for applications in tissue engineering. In: Antoniac IV, editor. Handbook of Bioceramics and Biocomposites: Springer International Publishing; 2016.