

Curriculum Vitae of Kelvin WK Yeung

Current position: Tenured Associate Professor, Department of Orthopaedics and Traumatology, The University of Hong Kong

Academic qualifications: BSc (Hons) in Material Technology (1998), MPhil in Medicine (2001), PhD in Medicine (2005), MHKIE (2009)

Past position held:

1. Research Assistant Professor, Department of Orthopaedics and Traumatology, The University of Hong Kong (6/2006 – 8/2007)
2. Assistant Professor, Department of Physics and Materials Science, City University of Hong Kong (8/2007 – 5/2009)
3. Assistant Professor (Non-clinical), Department of Orthopaedics and Traumatology, The University of Hong Kong (5/2009 – 12/2014)

Research Interest: Surgical correction for spinal deformities; Shape memory alloys for biomedical use; Orthopaedic implant design and development; Musculoskeletal tissue engineering; 3D bio-printing; Biomaterials surface treatments; *In-vitro* and *in-vivo* responses to biomaterials; Implant-related osteomyelitis

Research supervision: Current supervision (*as principal*): 3 Post-doc, 2 PhDs, 1 MPhil; *co-supervision*: 2 PhDs; graduated: 2 PDF, 11 PhDs & 9 MPhils

Grant records (*as principal/co-principal*): 1 MoST Key R&D, 7 RGC GRF, 5 ITF Tier 3, 1HMRF, 2 Technology Start-up Support Scheme TSSSU@HKU supported by ITC, 7 externals and 9 internals **in total of HK\$56.7M**

Professional membership:

(1) Associate member of Hong Kong Orthopaedic Association since 1999, (2) Member of AO Spine Group since 2004, (3) Active member of Orthopaedic Research Society since 2012, (4) Active Member of Society for Biomaterials, USA since 2008, (8) Member of Hong Kong Institution of Engineers since 2009.

Awards for scientific excellence:

- **Faculty Research Output Prize** selected by HKU LKS Faculty of Medicine, 2019
- **COA Orthopaedic Young Researcher Award 2nd Prize** selected by The 13th Annual Congress of Chinese Orthopaedic Association, Xiamen, PR of China, 2018.
- **Certificate of Merit Award of Young Engineer** of the Year organized by Hong Kong Institution of Engineers, Hong Kong, 2010.
- **Winner for Young Scientist Award 2005** organized by Hong Kong Institution of Science, Hong Kong, 2005.
- **Second-Prize Award** from the 8th National Challenge Cup Competition, a national competition of university students in extra-curricular academic, scientific and technological achievements, jointly organized by the Communist Youth League of China, the China Association for Science & Technology, the Ministry of Education, the People's Government of Guangdong Province and China's National Students Association.
- **Best Paper Award for Associate Fellow** selected by Hong Kong Orthopaedic Association in the Annual Congress 2003.
- **Finalist for Hibbs Basic Science Award** selected by International Scoliosis Research Society in the Annual Meeting 2005.
- **Finalist for Best Paper Award for Associate Fellow** selected by Hong Kong Orthopaedic Association in the annual congress 2000.
- **AO Foundation Fellowship**, overseas training at AO Foundation Headquarter in Davos, Switzerland, 2003.

- **Selected 10 publications:** *Journal publications up to 19th Nov 2019: Number of peer-reviewed SCI journal papers:232; Number of conference abstracts:260; Number of granted/filed patents:38; h-index:49 with 7,821 total citations (Google Scholar) and 44 with 6,209 total citations (Scopus); World's Top 1% of Scientists in Essential Science Indicators (ESI) (2014-2019 consecutively)*(*These authors equally shared corresponding authorship and # shared the 1st authorship)

(Five most representative publications in recent five years)

1. Zhengjie Lin, Ying Zhao*, Paul K. Chu, Luning Wang, Haobo Pan, Yufeng Zheng, Shuilin Wu, Xuanyong Liu, Kenneth M. C. Cheung, Takman Wong, Kelvin W.K. Yeung*. A functionalized TiO₂/Mg₂TiO₄ nano-layer on biodegradable magnesium implant enables superior bone-implant integration and bacterial disinfection. **Biomaterials**, (in press), July 2019. *(Citations: 0; IF:10.273 top 1 out of 32 in the field)*

2. Jinhua Li, Wei Liu, Xianlong Zhang*, Paul K. Chu *, Kenneth M. C. Cheung, Kelvin W. K. Yeung*. Temperature-responsive tungsten doped vanadium dioxide thin film starves bacteria to death. **Materials Today**, Vol.22, pp.35-49, February 2019. *(Citations: 3; IF:24.372 top 7 out of 293 in the field)*

3. Wei Liu, Jinhua Li, Mengqi Cheng, Qiaojie Wang, Kelvin W. K. Yeung*, Paul K. Chu* and Xinquan Jiang*. Zinc-Modified Sulfonated Polyetheretherketone Surface with Immunomodulatory Function for Guiding Cell Fate and Bone Regeneration. **Advanced Science**, Vol.5(10), Article number 1800749, October 2018. *(Citations: 6; IF:15.804 top 14 out of 293 in the field)*

4. Zhengjie Lin, Jun Wu, Wei Qiao, Ying Zhao, Karen H. M. Wong, Paul K. Chu, Liming Bian, Shuilin Wu, Yufeng Zheng, Kenneth M. C. Cheung, Frankie Leung, Kelvin W.K. Yeung*. Precisely controlled delivery of magnesium ions thru sponge-like monodisperse PLGA/nano-MgO-alginate core-shell microsphere device to enable in-situ bone regeneration. **Biomaterials**, vol.174, pp.1-16, May 2018. *(Citations: 14; IF:10.273 top 1 out of 32 in the field)*

5. Jinhua Li, Jin Wen, Bin Li, Wan Li, Wei Qiao, Jie Shen, Weihong Jin, Xinquan Jiang*, Kelvin W. K. Yeung*, and Paul K. Chu*. Valence State Manipulation of Cerium Oxide Nanoparticles on Titanium Surface for Modulating Cell Fate and Bone Formation. **Advanced Science**, Vol.5(2), Article number 1700678, February 2018. *(Citations: 12; IF:15.804 top 14 out of 293 in the field)*

(Five representative publications beyond the recent five-year period)

6. Shuilin Wu, Xiangmei Liu, Kelvin W.K. Yeung*, Changsheng Liu, Xianjin Yang. Biomimetic Porous Scaffolds for Bone Tissue Engineering. **Materials Science and Engineering R: Reports**, vol. 80, pp.1–36, June 2014. *(Citations: 450; IF:22.250 top 9 out of 293 in the field)*

7. Y. Zhao, J. M. Ibrahim, W. K. Li, G. Wu, C. Wang, Y.F. Zheng, K. W. K. Yeung*, and P. K. Chu*. Enhanced antimicrobial properties, cytocompatibility, and corrosion resistance of plasma-modified biodegradable magnesium alloys. **Acta Biomaterialia**, Vol.10(1), pp.544–556, January 2014. *(Citations: 114; IF:6.638 top 3 out of 32 in the field)*

8. H. M. Wong#, Y. Zhao#, V. Tam, S. L. Wu, P. K. Chu, Y. F. Zheng, M. K. T. To, Frankie K.L. Leung, K. D. K. Luk, K. M. C. Cheung, and K. W. K. Yeung*. In vivo Stimulation of Bone Formation by Aluminum and Oxygen Plasma Surface-Modified Magnesium Implants. **Biomaterials**, vol. 34(38), pp.9863-76, 2013. *(Citations: 64; IF:10.273 top 1 out of 32 in the field)*

9. Y. Zhao#, H. M. Wong#, W. H. Wang, P. H. Li, Z. S. Xu, E. Chong, S. M. Wong, C. H. Yan, K. W. K. Yeung*, and P. K. Chu*. Cytocompatibility, Osseointegration, and Bioactivity of 3-Dimensional Porous and Nanostructured Network on Polyetheretherketone. **Biomaterials**, Vol. 34(37), pp. 9264-77, 2013. *(Citations: 151; IF:10.273 top 1 out of 32 in the field)*

10. HM Wong#, KWK Yeung#, KO Lam, V Tam, PK Chu, KDK Luk, KMC Cheung. A Biodegradable Polymer-Based Coating To Control The Performance Of Magnesium Alloy Orthopaedic Implants. **Biomaterials**, Vol.31(8):2084-209, March 2010. *(Citations: 455; IF:10.273 top 1 out of 32 in the field)*