摘錄近五年研究論文與成果 (*:correspondence, 2020 JCR)

1. Yu-Feng Hu*, An-Sheng Lee, Shih-Lin Chang, Shien-Fong Lin, Ching-Hui Weng, Hsin-Yu Lo, Pei-Chun Chou, Yung-Nan Tsai, Yen-Ling Sung, Chien-Chang Chen, Ruey-Bing Yang, Yuh-Charn Lin, Terry B. J. Kuo, Cheng-Han Wu, Jin-Dian Liu, **Tze-Wen Chung***, Shih-Ann Chen, "Silk fibroin converts quiescent cardiomyocytes to pacemaker cells", 2021, Vol.5, Nov.22. (SCI, *IF= 25.671,* 1/90 of Biomedical Engineering, Top 1% of all SCI Journals); 2022-01, 陽明交通大學陽明校區 110 年第 4 季重要論文; 2021-12 陽明交通大學學校首頁(NYCU E-News-17 期)及各大媒體報導

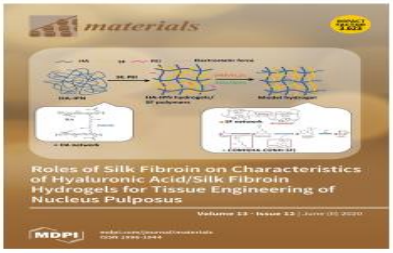
2. **Tze-Wen Chung***, Yu-Chang Tyan, Sheng-Wei Lin, Ming-Hui Yang, Yun-Huan Liu, Rou-Ping Wang, "Developing photothermal-responsive and anti-oxidative silk/dopamine nanoparticles decorated with drugs which were incorporated into silk films as a depot-based drug delivery", 2021, Int. J. Biological Macromolecules, Vol. 185, 122-133. (SCI, *IF= 6.953, 6/88, 6.25% of Polymer Science*); 2021-08,陽明交通大學陽明校區 110 年第 2 季重要論文;2021-10 陽明交通大學學校首頁(NYCU E-News-13 期)及各大媒體報導

3. P. Paramita, M. Ramachandran, S. Narashiman, Selvamurugan Nagarajan, S. Dinesh Kumar, **T.W.Chung**, Moorthi Ambigapathi*, "Sol–gel based synthesis and biological properties of zinc integrated nano bioglass ceramics for bone tissue regeneration.", 2021, 32, Article ID 5, Journal of Materials Science: Materials in Medicine. (SCI, *IF=3.896, 33/90,* 36.1% of Biomedical Engineering.)

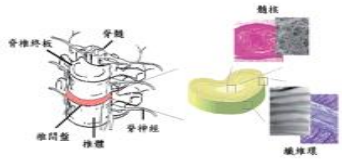
4. Po-Tsun Shen, Shih-Wei Chiu, Jia-Yaw Chang, **Tze-Wen Chung**, Chia-Hua Liang, Ming-Jay Deng, Tzung-Han Chou*, "Formation and characterization of hydrogenated lecithin/TPGS nano-dispersions as the potential carrier for active herbal agents", Colloids and Surfaces A: Physicochemical and Engineering Aspects. 2021, Vol. 611, Feb. 20, 125796. (SCI, *IF=4.539,* 64/162, 39.5% of Physical Chemistry)

5. K Mohamed Abudhahir, A Saleem, P Paramita, S Dinesh Kumar, **T.W.Chung**, N Selvamurugan, A Moorthi, "Polycaprolactone fibrous electrospun scaffolds reinforced with copper doped wollastonite for bone tissue engineering applications", J. Biomedical Mater. Res. Part B-Applied Biomaterials, 2021, Vol.109, May, 654-664. (SCI, *IF=3.36,35/87*, 40.2% of Biomedical Engineering)

6. **Tze-Wen Chung***, Weng-Pin Chen*, Pei-Wen Tai, Hsin-Yu Lo and Ting-Ya Wu, "Roles of silk fibroin on characteristics of hyaluronic acid/silk fibroin hydrogels for tissue engineering of nucleus pulposus", Materials, 2020, 13 (12), 2750 (19 pages), Cover page (期刊封面文章 in 232 paper/issue) (SCI, *IF = 3.623/3.920 (5yr),*17/80, 20.6% in Metallurgy & Metallurgical Engineering).



Tze-Wen Chung*, Weng-Pin Chen*, Pei-Wen Tai, Hsin-Yu Lo and Ting-Ya Wu, Materials, 2020, 13 (12), 2750 (19 pages), Cover page (232 papers in this issue)



椎間盤(Intervertebral disc, IVD)
位置及組成示意圖

主要由三個部分所組成[1]:
- 軟骨終板 (vertebral endplate)
- 髓核 (nucleus pulposus, NP)
- 纖維環 (annulus fibrosus, AF)

7. **Tze-Wen Chung***, Chun-Yi Chang, Chun-Ning Chang, Chiu-Hsun Liao, Yun-Jen Jan, Li-Ting Chen, Weng-Pin Chen*, "Developing a silk fibroin composite film to scavenge and probe H_2O_2 associated with UV-excitable blue fluorescence", Sensors, 2020, 20, (2) 366 (18 pages) (SCI, *IF =3.576/3.735, 14/64, 21.09 % of Instrument & Instrumentation*)

8. Yu-Chang Tyan, Ming-Hui Yang, Chin-Chuan Chang, **Tze-Wen Chung***, "Biocompatibility of Materials for Biomedical Engineering", Advanced in Experimental Medicine and Biology (AEMB), Book Series, Book: Biomimicked Biomaterials 2020 (June), Vol. 1250, Chapter 9, P.125-140 (SCI, *IF =2.622, 36/93, 38.2% of Biology*), Springer Nature Singapore Ltd. 2020. ISSN 2214-8019

9. Chien-Yu Chiu, **Tze-Wen Chung**, Si-Yi Chen, Yunn-Hwa Ma*, "Effects of PEGylation on Capture of Dextran-Coated Magnetic Nanoparticles in Microcirculation", Int. J. Nanomedicine, 2019, 14, 4767-4780 (SCI, *IF= 6.40; 27/ 275, 9.6% of Pharmacy and Pharma-cology*)

10. Pei-Chi Lee, Bo-Shen Zan, Li-Ting Chen, and **Tze-Wen Chung***, "Multi-functional PLGA-based Nanoparticles as a Controlled-Release Drug Delivery System for Antioxidant and Anticoagulant Therapy", Int. J. Nanomedicine, 2019, 14, 1533-1549. (SCI, *IF= 6.40; 27/ 275, 9.6% of Pharmacy and Pharmacology*)

11. Hsin-Yu Lo, An-Li Huang, Pei-Chi Lee, **Tze-Wen Chung*** and Shoei-Shen Wang, "Turning morphological transformation of hBMSC from 2D monolayer to 3D microtissue of silk/PCL cardiac tissue patches with promoting cardiomyogenesis by modulating the secondary structure of silk", J. Tissue Engineering and Regenerative Medicine, 2018, Vol.12, No.4-e1852-1864, (*IF=3.963, 29/90, 31.7 % of Biomedical Engineering.*

12. A. Moorthi, Yu-Chang Tyan, **Tze-Wen Chung***, "Surface-modified polymers for cardiac tissue engineering", Biomaterials Science, 2017, Oct, DOI: 10. 1039 /c7bm00309a. (*IF=6.843, 8/40, 19.75 % of Biomaterials).*

13. S. Azeena, N. Subhapradha, N Selvamurugan, S Narayan, N Srinivasan, R Murugesan, **T.W. Chung**, A. Moorthi, "Anti-bacterial activity of agricultural waste derived wollastonite doped with copper for bone tissue engineering", Materials Science & Engineering C- Materials for Biological Applications, 2017,

71, 1156-1165. (SCI, *IF=7.328, 7/40, 17.5% of Biomaterials*)

14. **Tze-Wen Chung***, Hsin-Yu Lo, Tzung-Han Chou, Jan-Hou Chen, Shoei-Shen Wang, **"**Promoting cardiomyogenesis of hBMSC with a forming self-assembly hBMSC microtissues/HA-GRGD/ SF-PCL cardiac patch is mediated by the synergistic functions of HA-GRGD", Macromolecular Bioscience, 2017, 17, 1600173 *(IF=4.979, 13/88, 14.2% of Polymer Science)*

15. Shih-Cheng Chen, Ming-Hui Yang, **Tze-Wen Chung**, Ting-Syuan Jhuang, Jean-Dean Yang, et al., "Preparation and characterization of hyaluronic acid-polycaprolactone copolymer micelles for the drug delivery of radioactive iodine-131 labeled lipiodol", BioMed. Res. Int., 2017, Article ID 4051763, 8 pages. (SCI, *IF=3.411, 69/159, 43.40% of Biotechnology & Applied microbiology*)

16. Ming-Hui Yang, Ko-Chin Chen, Pei-Wen Chiang, **Tze-Wen Chung,** et al., "Proteomic profiling of neuroblastoma cells adhesion on hyaluronic acid-based surface for neural tissue engineering", BioMed. Res. Int., 2016, Article ID 1917394, 13 pages. (SCI, *IF=3.411, 69/159, 43.40% of Biotechnology & Applied microbiology)*

17. **Tze-Wen Chung***, Tzung-Han Chou, Kui-Ye Wu, **"**Gelatin/PLGA hydrogel films and their delivery of hydrophobic drugs", J. Taiwan Inst. Chem. Engr., 2016, 60, 8-14. (SCI, *IF=5.876, 25/143 ,17.23% of Chem. Engineering*)

1. 中華民國發明專利: 鍾次文,張峻翊:用以偵測及清除自由基之複合材料及其用途;發明專利第I639704,期間2018/11/01-2037/06/15.

2. 中華民國發明專利: 胡瑜峰,鍾次文,陳適安:用以製備起博細胞的方法與組合物; 發明專利第I643952,期間2018/12/11-2037/10/30.

3. 美國發明專利: Yu-Feng Hu, Tze-Wen Chung, Shih-Ann Chen: METHODS AND COMPOSITIONS FOR GENERATING PACE-MAKER CELLS. Serial No. 15/798,619（申請審核中）

4. 財團法人李昭仁教授生醫工程發展基金會- 2016 年研究學者獎

5. 國際生醫材料科學暨工程學會 (**IUSBSE**)-2016 **會士, Fellow**.

6. 2020 **年中華民國生醫材料及藥物制放學會年會 (BCRS) -主辦及大會主席**, **8/18 陽明大學**.

7. 2021/11-獲邀為 **European Science Foundation 群體計畫審查委員**(reviewer, 21-FWO-SBO-ES-XXX)

8. 2021-12, **"Pharmaceutics"** (SCI, IF= 6.321), Guest Editor, the Special Issue, "Multifunctional Nanoparticles for Drug Delivery and Tissue Engineering Applications", MDPI publications. (**10% of Pharmacy and Pharmacology**)

近期畢業生學生成就

9. **會議: 2019** 中華民國生醫材料暨藥物制放學會年會: 作者: 鄭芷菱, 林昇偉, Tze-Wen Chung. 壁報論文競賽: **Outstanding(佳作獎)** 2019/03/29.題目: A Heparin Decorated Film Composed of SF/PDA NPs Coated by Dual Drugs for Anticoagulation and Anti-oxidation Implant Biomaterials **(Outstanding, 佳作獎)**

   會議: 2018 中華民國生醫材料暨藥物制放學會年會，高雄市高雄醫學大學，日期: 2018/ 03/23。作者: Ting-Ya Wu, Pei-Wen Tai, Hsin-Yu Lo, Chiu-Hsun Liao (廖久薰), Tze-Wen Chung. 題目: Studying properties of hyaluronic acid-silk fibroin interpenetrating-network hydrogel and influence of different breeds of silk. (**佳作獎**).

   會議: 2016 中華民國生醫材料暨藥物制放學會年會及李昭仁教授紀念研討會，新竹市清華大學，日期: 2016/03/17-2016/03/22。作者: Pei-Wen Tai, Hsin-Yu Lo and Tze-Wen Chung. 題目: Producing 3D hBMSC spheroids SF/PCL hybrid cardiac patches by regulating mechanical property of the substrates.(**佳作獎**)

   會議: 2015 生物醫學工程科技研討會暨科技部醫學工程學門成果發表會，台北市台灣大學，日期: 2015/11/12-2015/11/23。作者: Hsin-Yu Lo, Jan-Hou Chen, Tze-Wen Chung. 題目:玻尿酸與 GRGD 之雙功能貼片促進人類骨髓間質幹細胞聚集及心肌分化。(**佳作獎**)

10. **畢業生其他成就:** 北醫劉教授/PITDC劉總經理; 高醫田教授; 工研院楊副理; 工研院南院區黃經理; 生技公司楊總經理; 生技公司工程師; 食藥署(TFDA), 醫檢所檢驗師, 藥廠正, 副工程師, QA部經理; 美國普渡大學博士班; ……等.