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Education

B.D., Department of **Materials Science and Engineering, Akita University, Japan**
M.D., Materials Science and Engineering, Materials Science and Engineering, Graduate School of Engineering and Resource Science, Akita University, Japan
Ph.D., Advanced Materials Engineering, Graduate School of Engineering and Resource Science, Akita University, Japan

Expertise

Guest professor, Department of Materials Science and Engineering, Akita University, Japan
Professor, Department of chemical and material Engineering, Lunghwa University of Science and Technology, Taiwan
Associate Professor, Department of chemical and material Engineering, Lunghwa University of Science and Technology, Taiwan
Assistant Professor, Department of chemical and material Engineering, Lunghwa University of Science and Technology, Taiwan
Vice-chief secretary, *Institute of Plasma Engineering* Taiwan
Post-doctoral, Department of Materials Science and Engineering, Akita University, Japan

Research Interests

Biomedical Engineering
Material Engineering
Medical equipment development
Plasma Technology
Material analysis

Selected Grants:

1. Bio-Plasma Technology Alliance.(MOST 109-2622-8-039-003 -TB1)
2. The application of high electric field plasma in the hydrogen generator for vehicle used fuel cell battery. (MOST 107-2221-E-039-012-)

Selected Publications

1. Ling-Chuan Hsu, Wen-Chien Lan, Keng-Liang Ou, Hsin-Hua Chou, Shih-Cheng Wen, Liu Chung Ming, Kazuhiko Endo, Mao-Suan Huang*, Chiung-Fang Huang*. "Fabrication of biomolecules coated nanostructured oxide layer to facilitate cell adhesion and proliferation for improving osseointegration" , CERAMICS INTERNATIONAL, 45(2019):21941-21946, 2019. (SCI, Category: MATERIALS SCIENCE, CERAMICS: 2/28 \cong 7.14%, IF=3.450)
2. Liu Chung Ming, Yasushi Nishida*, K. Iwasaki, Sung Wei, Feng-Ping Wu. "Characteristics of DC or Pulsed-Type High-Electric Field Plasma and Its Application to Air Cleaning System", IEEE TRANSACTIONS ON PLASMA SCIENCE, 2(47):1121-1128, 2019. (SCI, Category: PHYSICS, FLUIDS & PLASMAS: 25/32 \cong 78.12%, IF=1.325)

3. Chi-Ming Wu, Liu Chung Ming, Keng-Liang Ou, Hsi-Jen Chiang, Erwan Sugiatno, Chia-Hung Wu, Hsiu-Ju Yen*, Hsin-Hua Chou*. “Nanostructured titanium dioxide layer combined with reactive functional groups as a promising biofunctional surface for biomedical applications” , CERAMICS INTERNATIONAL, 45(8):9712-9718, 2019. (SCI, Category: MATERIALS SCIENCE, CERAMICS: 2/28 \doteq 7.14%, IF=3.450)
4. Shih-Hsien Chang*, Chang-Kai Peng, Kuo-Tsung Huang, Liu Chung Ming. “Enhancement of the Wear and Corrosion Resistance of DLC/oxynitriding Duplex-treated PM30 Steel by the Asymmetric Bipolar-pulsed Plasma Enhanced CVD”, ISIJ INTERNATIONAL, 58(8):1510-1518, 2018. (SCI, Category: METALLURGY & METALLURGICAL ENGINEERING: 35/76 \doteq 46.05%, IF=1.427)
5. Hsi-Jen Chiang, Hsin-Hua Chou, Keng-Liang Ou, Erwan Sugiatno, Muhammad Ruslin, Rahmat Abd Waris, Chiung-Fang Huang, Liu Chung Ming*, Pei-Wen Peng*. “Evaluation of Surface Characteristics and Hemocompatibility on the Oxygen Plasma-Modified Biomedical Titanium” , Metals, 8(7):513-522, 2018. (SCI, Category: METALLURGY & METALLURGICAL ENGINEERING: 18/76 \doteq 23.68%, IF=2.259)
6. Chi-Ming Wu, Pei-Wen Peng, Hsin-Hua Chou, Keng-Liang Ou, Erwan Sugiatno, Liu Chung Ming, Chiung-Fang Huang*. “Microstructural, mechanical and biological characterizations of the promising titanium-tantalum alloy for biomedical applications”, JOURNAL OF ALLOYS AND COMPOUNDS, 735(2018):2604-2610, 2018. (SCI, Category: METALLURGY & METALLURGICAL ENGINEERING: 4/76 \doteq 5.26%, IF=4.175)
7. Mao-Suan Huang, Chia-Yu Wu, Keng-Liang Ou, Bai-Hung Huang, Tien-Hsin Chang, Kazuhiko Endo, Yung-Chieh Cho, Hsing-Yu Lin*, and Chung-Ming Liu* “Preparation of a Biofunctionalized Surface on Titanium for Biomedical Applications: Surface Properties, Wettability Variations, and Biocompatibility Characteristics”, Applied Sciences-Basel, 10(2020):1438-1449, 2020. (SCI, Category: PHYSICS, APPLIED:63/155 \doteq 40.64, IF=2.474)
8. Shih-Hsien Chang*, Yu-Cheng Lai, Kuo-Tsung Huang and Chung-Ming Liu. “Characteristics of DLC/oxynitriding duplex-treated V8 tool steel by DC-pulsed PECVD”, SURFACE ENGINEERING, 36(5):516-523, 2020. (SCI, Category: MATERIALS SCIENCE, COATINGS & FILMS: 11/21 \doteq 52.38, IF=2.433)
9. Chia-Cheng Lin, Chia-Yu Wu, Mao-Suan Huang, Bai-Hung Huang, Hsin-Hua Chou, Keng-Liang Ou, Chung-Ming Liu, Fang-Tzu Pai, Han-Wei Huang,* and Pei-Wen Peng. “Porosity Structure Offering Improved Biomechanical Stress Distribution and Enhanced Pain-Relieving Potential”, Applied Sciences-Basel, 10(2020):3026-3034, 2020. (SCI, Category: PHYSICS, APPLIED:63/155 \doteq 40.64, IF=2.474)
10. Syamsiah Syam, Yung-Chieh Cho, Chung-Ming Liu, Mao-Suan Huang, Wen-Chien Lan, Bai-Hung Huang, Takaaki Ueno, Chi-Hsun Tsai, Takashi Saito, May-Show Chen* and Keng-Liang Ou* “An Innovative Bioceramic Bone Graft Substitute for Bone Defect Treatment: In Vivo Evaluation of Bone Healing”, Applied Sciences-Basel, 10(2020):8303-8315, 2020. (SCI, Category: PHYSICS, APPLIED: 63/155 \doteq 40.64, IF=2.474)
11. Ping-Jen Hou, Syamsiah Syam, Wen-Chien Lan, Keng-Liang Ou, Bai-Hung Huang, Ka-Chun Chan, Chi-Hsun Tsai, Takashi Saito, Chung-Ming Liu, Hsin-Hua Chou, Yueh-Tzu Huang* and Fang-Yu Fan. “Development of a Surface-Functionalized Titanium Implant for Promoting Osseointegration: Surface Characteristics, Hemocompatibility, and In Vivo Evaluation”, Applied Sciences-Basel, 10(2020):8582-8591, 2020.(SCI, Category: PHYSICS, APPLIED: 63/155 \doteq 40.64, IF=2.474)

Selected Patents

1. High field plasma generator and refrigerator equipped the high field plasma generator, i375004, Ting, Kuen; Liu, Chung Ming; Ken, Ichi Iwasaki; Yasushi, Nishida (Taiwan patent)(2029.07.20)
2. Device and related method for decomposing polymer materials using h2o plasma, i327154, Liu, Chung Ming; Sung, Ta Lun; Teii, Shinriki (Taiwan patent)(2026.06.11)
3. Device and related method for printed circuit board de-smear process using h2o plasma, i317609, Sung, Ta Lun; Liu, Chung Ming; Teii, Shinriki (Taiwan patent)(2026.05.28)
4. A method and related device of decoloration of dye solution, i381998, Sung, Ta Lun; Liu, Chung Ming; Ting,

Kuen; Yen, Chin Kuo (Taiwan patent)(2028.10.06)

5. Hydrogen generation method, device for performing the method, and automobile fuel generator using the device, i447068, Liu, Chung Ming; Nishida, Yasushi; Iwasaki, Ken Ichi (Taiwan patent)(2013.08.17)
6. Plasma measurement device, plasma system, and method for measuring plasma characteristics , i466158, Liu, Chung Ming; Ting, Kuen; Matsumura, Shosaku; Teii, Shinriki; Sung, Ta Lun (Taiwan patent)(2029.12.21)
7. Plasma hydrogen production device for new energy vehicles, i473912, Iwasaki, Ken Ichi; Chen Qiurong; Yasushi; Liu, Chung Ming; (Taiwan patent)(2033.03.27)
8. Hydrogen generator and fuel power generator for automobiles using the device, 5641814, Iwasaki, Ken Ichi; yasushi; Liu, Chung Ming (japan patent)
9. Plasma measurement device, plasma system, and method for measuring plasma characteristics, patent no : us 8368378 b2, Sung Ta Lun; Chung-Ming Liu; Kuen Ting; Shosaku matsumura; Shinriki teii (u.s. patent)
10. Plasma filter structure , i587906 , Lin An Xin; Liu, Chung Ming; Iwasaki, Ken Ichi; Sung Wei; Wu Feng Bin; Hu Yu Lian (Taiwan patent) (2017/06/21)
11. Purification of hydrogen gas filtration device , i605015 , Liu, Chung Ming; Iwasaki, Ken Ichi; Lin An Xin; Sung Wei; Wu Feng Bin (Taiwan patent) (2017/11/11)