

郭茂坤 個人簡歷

1. 個人資料：

辦公室： 320 室

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現職： 台大應力所 教授

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2. 學歷：

1984： (美國) 西北大學博士 (土木系)

1979、1977： 臺灣大學碩士、學士 (土木系)

3. 獲獎：

2012 台大特聘教授

2012, 2004 台大教學傑出獎；

1987, 1999, 2003, 2009 台大教學優良獎；1987 教育部教學傑出獎

4. 專長：

奈米金屬結構光學特性、固體力學分析及模擬

5. 研究興趣：固體力學以及相關的奈米力學 (擬收學生數 3 人)

(a) 渦電流檢測訊號的 AI 辨識

(b) :奈米結構的光渦漩捕捉

(c) 奈米氣泡的研究及量測

6. 研究成果目錄：

- (1) J.-W. Liaw*, S.-Y. Mao, J.-Y. Luo, Y.-C. Ku, M.-K. Kuo*, 2021, Surface plasmon polaritons of higher-order mode and standing waves in metallic nanowires, *Optics Express*, 29, 18876.
- (2) J.-W. Liaw*, G. Liu, Y.-C. Ku, M. K. Kuo*, 2020, Plasmon-enhanced photothermal and optomechanical deformations of a gold nanoparticle, *Nanomaterials*, 10, 181.
- (3) J. W. Liaw*, M. C. Huang, C. W. Huang, Y. C. Ku, M. K. Kuo*, 2019, Light-driven self-organization of gold clusters by linearly polarized Gaussian beam, *Journal of Quantitative Spectroscopy & Radiative Transfer*, 233, 35–41.
- (4) J. W. Liaw*, M. C. Huang, H. Y. Chao, M. K. Kuo*, 2018, Spin and orbital rotation of plasmonic dimer driven by circularly polarized light, *Nanoscale Research Letters*, **13**, 322.
- (5) J. W. Liaw*, C. W. Chien, K. C. Liu, Y. C. Ku, M. K. Kuo*, 2018, 3D optical vortex trapping of plasmonic nanostructure, *Scientific Reports*, **8**, 12673.
- (6) J. W. Liaw*, C. W. Huang, M. C. Huang, M. K. Kuo*, Plasmon-enhanced optical bending and heating on V-shaped deformation of gold nanorod, 2018, *Applied Physics A- Materials Science & Processing* **124**, 17
- (7) J. W. Liaw*, H. Y. Chao, C. W. Huang, M. K. Kuo*, 2018, Light-driven self-assembly of hetero-shaped gold nanorods, *Applied Physics A-Materials Science & Processing* **124**, 16

- (8) J. W. Liaw*, W. C. Lin and M. K. Kuo*, 2017, Wavelength-Dependent Plasmon-Mediated Coalescence of Two Gold Nanorods, *Scientific Reports*, **7**, 46095.
- (9) D. J. Y. Feng, Y. J. Lin, Y. C. Ku, H. Y. Jhang, T. R. Lin, and M. K. Kuo*, 2017, GaAsSb spacer effect in quasi-type-II InAs coupled-QDs for intraband absorption enhancement, *Optical Materials Express*, **7**, 1351-1364.
- (10) J. W. Liaw*, Y. S. Chen, M. K. Kuo*, 2016, Spinning gold nanoparticles driven by circularly polarized light, *Journal of Quantitative Spectroscopy & Radiative Transfer*, **175**, 46–53.
- (11) J. W. Liaw*, Y. S. Chen, M. K. Kuo*, 2016, Maxwell stress induced optical torque upon gold prolate nanospheroid, (invited paper) *Applied Physics A - Materials Science & Processing*, **122**: 182
- (12) J. W. Liaw*, H. Y. Wu, C. C. Huang and M. K. Kuo*, 2016, Metal-enhanced fluorescence of silver island associated with silver nanoparticle, *Nanoscale Research Letters* 11:26.
- (13) J. W. Liaw*, T. Y. Kuo, M. K. Kuo*, 2016, Plasmon-mediated binding forces on gold or silver homodimer and heterodimer, *Journal of Quantitative Spectroscopy & Radiative Transfer*, **170**, 150–158.