

論文著述：

(A) Journal papers (SCI/ EI)

1. Y. C. Lee, S. W. Chang, S. H. Chen, S. L. Chen, and H. L. Chen*, “Optical inspection of two-dimensional materials: From mechanical exfoliation to wafer-scale growth and beyond,” *Advanced Science*, (2022), 9, 2102128
2. Y. L. Chang, I. C. Lai, L. C. Lu, S. W. Chang, A. Y. Sun, D. Wan*, and H. L. Chen* “Wafer-scale nanocracks enable single-molecule detection and on-site analysis,” *Biosensors and Bioelectronics*, 200, (2022) 113920
3. Y. C. Tseng, S. W. Chang, Y. C. Lee, and H. L. Chen*, “Cavity-enhanced magnetic dipole resonance induced hot luminescence from hundred-nanometer-sized silicon spheres,” *Nanophotonics*, (2022) 11(16): 3583–3593
4. S. L. Chen, S. W. Chang, Y. J. Chen, and H. L. Chen*, “Possible warming effect of fine particulate matter in the atmosphere,” *Communications Earth and Environment*, 2, 208 (2021)
5. C. C. Lin, B. J. Chang, S. H. Chen, K. T. Lin, S. W. Chang, W. Y. Chen, B. Y. Chen, M. C. Liu, and H. L. Chen*, “Gallium arsenide-based active antennas for optical communication photodetection with robustness to voltage and temperature,” *Advanced Optical Materials*, 9, 2100165 (1-12) (2021) DOI: 10.1002/adom.202100165
6. S. L. Chen, C. C. Yu, S. W. Chang, Y. C. Lee, and H. L. Chen*, “Optimization and simulation of a carbon nanotube arrangement for transparent conductive electrodes with record-high direct current to optical conductive ratios,” *Optical Materials Express*, Vol. 11, No. 4 / 1205-1217 (2021)
7. A. Y. Sun, Y. C. Lee, S. W. Chang, S. L. Chen, H. C. Wang, Dehui Wan*, and H. L. Chen, “Diverse Substrate-Mediated Local Electric Field Enhancement of Metal Nanoparticles for Nanogap Enhanced Raman Scattering,” *Analytical Chemistry*, 93, 4299-4307 (2021)
8. T. Y. Lin, K. T. Lin, C. C. Lin, Y. W. Lee, L. T. Shiu, W. Y. Chen and H. L. Chen*, “Magnetic fields affect hot electrons in silicon-based photodetectors at telecommunication wavelengths,” *Materials Horizons*, 6, 1156-1168 (2019) (**Inside Back Cover 期刊封面**)
9. S. J. Kuo, S. W. Chang, Y. Y. Hui, O. Y. Chen, Y. W. Chen, C. C. Lin, Dehui Wan, H. L. Chen*, and H. C. Chang*, “Fluorescent Microdiamonds Conjugated with Hollow Gold Nanoparticles as Photothermal Fiducial Markers in Tissue,” *Journal of Materials Chemistry C*, 7, 15197-15207 (2019)

10. K. T. Lin, C. J. Chan, Y. S. Lai*, L. T. Shiu, and H. L. Chen*, “Silicon-Based Embedded Trenches of Active Antennas for High-Responsivity Omnidirectional Photodetection at Telecommunication Wavelengths”, *ACS Applied Materials & Interfaces*, Volume 11, Issue 3, 3150–3159, (2019) (**Supplementary Cover 期刊封面**)
11. C-K Ku, P-H Wu, C-C Chung, C -C Chen, K-J Tsai, H-M Chen, Y-C Chang, C-H Chuang, C-Y Wei, C-Y Wen, T-Y Lin, H. L. Chen, Z-Y Lee, J-R Chang, Y-S Wang, D-Y Wang, Bing Joe Hwang, Chun-Wei Chen, “Creation of three-dimensional textured graphene/Si Schottky junction photocathode for enhanced photoelectrochemical efficiency and stability”, *Advanced Energy Materials*, 1901022, (2019) (**Back Cover 期刊封面**)
12. T. Y. Lin, Y. C. Lee, Y. W. Lee, S. W. Chang, D. L. Ma, B. C. Lin, H. L. Chen*, “Air Gap-Based Cavities Dramatically Enhance the True Intrinsic Spectral Signals of Suspended and Pristine Two-Dimensional Materials,” *The Journal of Physical Chemistry C*, 123 (9), 5667-5679 (2019)
13. Y. C. Tseng, T. Y Lin, Y. C. Lee, C. K. Ku, C. W Chen, and H. L. Chen*, “Magnetic dipole resonance and coupling effects directly enhance the Raman signals of as-grown graphene on copper foil by over a hundredfold,” *Chemistry of Materials*, 30, 1472-1483 (2018)
14. S. J. Kuo, P. C. Tsai, Y. C. Lee, S. W. Chang, S. Sotoma, C. Y. Fang, H. C. Chang and H. L. Chen*, “Manipulating the distribution of electric field intensity to effectively enhance the spatial and spectral fluorescence intensity of fluorescent nanodiamonds,” *Nanoscale*, Vol. 10 No. 37 pp. 17576–17584 (2018) (**當期期刊內封面**)
15. K. T. Lin, H. L. Chen*, Y. S. Lai,* C. C. Yu, Y. C. Lee, P. Y. Su, Y. T. Yen, and B. Y. Chen, “Loading effect-induced broadband perfect absorber based on single-layer structured metal film,” *Nano Energy*, 37, 61–73 (2017)
16. Y. C. Lee, Y. C. Tseng, and H. L. Chen*, “Single Type of Nanocavity Structure Enhances Light Outcouplings from Various Two-Dimensional Materials by over 100-Fold,” *ACS Photonics* 4, 93–105 (2017)
17. Y. C Tseng, Y. C. Lee, S. W. Chang, T. Y. Lin, D. L. Ma, B. C. Lin, and H. L. Chen*, “Enhancing Raman Signals through Electromagnetic Hot Zones Induced by Magnetic Dipole Resonance of Metal-Free Nanoparticles,” *Nanotechnology*, 28 (2017) 465202.
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- of graphene in a simple nanocavity structure,” *Carbon*, 108 (2016) 253-261. (SCI)
20. Y. C. Tseng, Y. C. Cheng, Y. C. Lee, D. L. Ma, B. Y. Yu, B. C. Lin, and H. L. Chen*, “Using Visible Laser-Based Raman Spectroscopy to Identify the Surface Polarity of Silicon Carbide,” *Journal of Physical Chemistry C*, (2016), 120, 18228–18234. (SCI)
 21. K. T. Lin, H. L. Chen*, Y. S. Lai*, “Filter-free, junctionless structures for color sensing,” *Nanoscale*, 8, 16936–16946 (2016) (SCI)
 22. K. T. Lin, H. L. Chen*, Y. S. Lai,* Y. M. Chi, and T. W. Chu, “Plasmonics-Based Multifunctional Electrodes for Low-Power Consumption Compact Color-Image Sensors,” *ACS Applied Materials & Interfaces*, 8, 6718–6726 (2016) (SCI)
 23. T. Y. Lu, Y. C. Lee, Y. T. Yen, C. C. Yu, and H. L. Chen*, “Astronomical liquid mirrors as highly ultrasensitive, broadband operational surface-enhanced Raman scattering-active substrates,” *Journal of Colloid and Interface Science*, (2016) Volume 466, 15 March, Pages 80-90 (SCI)
 24. Y. L. Liu, C. C. Yu, K. T. Lin, T. C. Yang, E. Y. Wang, H. L. Chen*, L. C. Chen, and K. H. Chen, “Transparent, Broadband, Flexible, and Bifacial-Operable Photodetectors Containing a Large-Area Graphene-Gold Oxide Heterojunction,” *ACS Nano* Vol. 9, No. 5, 5093–5103 (2015).
 25. S. H. Tsao, Dehui Wan, Y. S. Lai, H. M. Chang, C. C. Yu, K. T. Lin, and H. L. Chen, “White Light-Induced Collective Heating of Gold Nanocomposite/B. mori Silk Thin Films with Ultrahigh Broadband Absorbance,” *ACS Nano* accepted DOI: 10.1021/acsnano.5b04913 (2015)
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 29. Y. C. Lee, E. Y. Wang, Y. L. Liu, and H. L. Chen*, “Using Metal-less Structures To Enhance the Raman Signals of Graphene by 100-fold while Maintaining the Band-to-Band Ratio and Peak Positions Precisely,” *Chemistry of Materials*, 27, 876–884 (2015) (SCI)
 30. P. H. Ho, W. C. Lee, Y. T. Liou, Y. P. Chiu, Y. S. Shih, C. C. Chen, P. Y. Su, M. K. Li, H. L.

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