Professor Chia-Liang Cheng (鄭嘉良)
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Education:
1993/9 - Ph.D., Dept. of Physics, University of Oregon, Eugene OR, USA.
Advisor: Professor Thomas R. Dyke, Professor of Chemistry, University of Oregon
1987/6 - M. Sc., Dept. of Physics, University of Oregon, Eugene OR, USA
1983/7 - B. Sc, Department of Physics, National Taiwan Normal University, Taipei, Taiwa

He received his Ph. D. degree from the Physics Department of the University of Oregon, USA in 1993. After obtaining his Ph. D. degree, he was a post-doc with Prof Y.T. Lee (Nobel Laureate in Chemistry, 1986) at the Chemistry Department of the University of California, Berkeley and also Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei from 1994-1997. He was an assistant Professor in Dept of Physics, National Taiwan Normal University (1997-1998); then he moved to National Dong Hwa University (NDHU) in 1998. In NDHU, he has served as Director, Department of General Education, and Director of Arts Center (2002-2005); Chairman of the Physics Department (2005-2008), Dean of Committee for General education (2009-2016), and Vice President of the NDHU (2012-2016).

Currently he is the Vice Chair of C6, IUPAP (International Union of Physics and Applied Physics, 2025-2027. He was the commission member of C6 IUPAP (2022-2024)**.** He is also currently Convener of the Internatioanl Collaboration review panel of National Science and Technology Council (NSTC), Taiwan. 2025- present. He was the Convener of Physics Review Panel of NSTC (2021-2023). He has served in various Domestic and International Program Committees, such as Hasselt Diamond Workshop-SBDD (2017-); the International Conference on Diamond and Carbon Materials (2009-); International **S**teering Committee of International Conference on Raman Spectroscopy (2012-2018; 2018-2026); Review committee member of the Physics panel, National Science Council in Taiwan (NSTC, 2008-2010); Panel Member, Physic Research Promotion Center, Taiwan (PRPC, 2007- 2010); Committer Member, Physical Society of the Republic of China, Taiwan (PSROC, 2005-2009); Advisory board member of *Journal of Raman Spectroscopy* (2017-); Editorial member, International Journal of Nanoelectronics and Materials (IJNeaM, May 2017-April 2019).

His specialty is on spectroscopic studies of bio/medical application of nanomaterials. He is a leader in using nanodiamond as a drug delivery vehicle internationally, to more efficiently deliver anticancer drug to the target tumor sites. His research interests are in Bio/medical applications of nanodiamond; Spectroscopic studies on nanomaterials; His group is one of the pioneering groups in the world to successfully use nanodiamond as a biological marker to observe bio molecules interaction with cells or bacteria. They have recently focused their effort in anticancer drug delivery using nanodiamond as a delivery vehicle into cancer tumors in the cellular and animal model; and cancer cell recognition in early stage. He has been giving invited lectures in almost all the important diamond research and bio photonics conferences.

Selected Publications:

Total SCI papers **142**;
International Conference **200**; Plenary **4**; Keynote **3**; invited talk **69**,

h-index **46**; total citation **7690** (Google Scholar, Oct 13, 2026)

1. The antibacterial pathway of nanodiamond against *Escherichia coli* and 3D-printable ND-Polycaprolactone antibacterial composites, Cheng-Yu Chang, Chia-Hsuan Tsou, and Chia-Liang Cheng* for your consideration for publication in the *Diamond and Related Materials*, 170 (2026) 114263.

2. Observation and Analysis of Luminescence of a Colloidal-Organized Suspension of Nanodiamond, Artashes Karmenyan[1]*, Elena Perevedentseva[2], Pooja Manik Badgujar[1] , Nikolai Melnik[2] and Chia-Liang Cheng[1]. *C: Jopurnal of Carbon Research,* 2026, *12*, 63; https://doi.org/10.3390/c12030063

3. Impact of graphene oxide nanoparticles on *in vitro* development of a mouse preimplantation embryo and interaction with the zona pellucida, Artashes V. Karmenyan[a], Alexander S. Krivokharchenko[a], Micahella N. Sarmiento[a], Eviyona L. Barus[a], Elena V. Perevedentseva[b], Chia-Liang Cheng[a,] *, J. of Biophotonics 0: e202400268 (Sept 2024 accepted) 01 October 2024 https://doi.org/10.1002/jbio.202400268

4. Fe doped Nanodiamond-Based Photo-Fenton Catalyst for Dual-Modal Fluorescence Imaging and Improved Chemotherapeutic Efficacy against Tumor Hypoxia, Rajakar Selvam[a], Wrenit Gem Pearl[a], Elena Perevedentseva[a, b], Artashes Karmenyan[a], Chia-Liang Cheng[a*], *RSC Advances*, 2024, 14, 4285-4300. (Accepted 17th January 2024)

5. Berberine mediated fluorescent gold nanoclusters in biomimetic erythrocyte ghosts as a nanocarrier for enhanced photodynamic treatment, Wrenit Gem Pearl,[a] Rajakar Selvam,[a] Artashes V. Karmenyan,[a] Elena V. Perevedentseva,[b] Shih-Che Hung,[c] Hsin-Hou Chang,[c] Natalia Shushunova,[d] Ekaterina S. Prikhozhdenko,[d] Daniil Bratashov,[d] Valery V. Tuchin[d] and Chia-Liang Cheng*[a], *RSC Advances*, 2024, 14, 3321-3334. (Jan 2024)

6. Multifunctional ferromagnetic nanodiamond for dual-mode fluorescence imaging and magnetic drug targeting, Rajakar Selvam[1], Ashish Gandhi[1], Shih-Che Hung[3], Artashes V. Karmenyan[1], Elena Perevedentseva[1, 2], Wang-Chi Yeh[1], Sheng-Yun Wu[1], Hsin-Hou Chang[3], Chia-Liang Cheng[1]*, Diamond and Related Materials, V139, Nov 2023, 110398.

7. Raman spectroscopic signals of carotenoid distribution during stages of cell growth of unicellular organisms and plant cells, Pooja Manik Badgujar[1], Yu-Chung Lin[1], Zhe-Rui Lin[1], Ming-Der Lin[2], Chia-Liang Cheng*, J. Raman Spectroscopy, 54 (7) 706-718 (July, 2023); https://doi.org/10.1002/jrs.6537

8. SYNAPSE: An international roadmap to large brain imaging, Anton P.J. Stampfl et al. (41 authors), Physics Reports 999 (2023) 1–60.