CURRICULUM VITAE

Dr. Raman Sankar

Senior Assistant Research Scientist
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Postdoctoral Position

1. Research Scientist at Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan (2011-2014) – Specialize in Topological insulator and Thermoelectric single crystal.
2. Postdoctoral Research Fellow at Centre for Condensed Matter Sciences, National Taiwan University Taipei, Taiwan (2009 - 2011) - Specialize in Antiferromagnetic, thermo power and Topological insulator single crystal
3. Postdoctoral Research Fellow at Crystal growth Centre, Anna University, India under Dr. KOTHARI POSTDOTROAL POSITION (Jan 2008 – Aug 2009) – Specialize in Nonlinear optical single crystals

Research Interest

Quantum matter, Quantum many-body physics, Fundamental condensed matter physics: Strongly correlated electrons, Topological phases of quantum matter, Quantum magnetism, Superconductivity, ARPES, Spin-ARPES, TR-ARPES, Resonant and Inelastic X-ray scattering, Advanced X-ray spectroscopy, X-ray free electron Lasers, Ultrafast physics, Crystal Growth techniques (Optical/IR Furnace, Bridgeman).

Reviewer: Physical Review Journal, Advanced Optical Materials, American Chemical Society, Nano letters, Journal of Crystal Growth and etc.,

Educational qualifications

DOCTOR OF PHILOSOPHY (Ph.D.,) (2004-2008)

Thesis titled "Growth and Characterization of organo metallic Nonlinear Optical Single Crystals"

Institution: Crystal Growth Centre, Anna University, Chennai-600 025, India

MASTER OF SCIENCE (M.Sc.,)

Institution	:	Department of Physics, **Thiyagarajar College of engineering,** **Madurai Kamaraj University**
Year	**:**	2001-2003
Subject	:	Materials Science and Technology (First Class -89%)

MASTER OF DIPLOMOA (P.G.D.C.A)

Institution	:	The American College, Madurai Kamaraj University
Year	:	2000-2001
Subject	:	Computer (86 %First Class with Distinction)

BACHELOR OF SCIENCE (B.Sc.,)

Institution	:	The American College, Madurai Kamaraj University
Year	:	1997-2000
Subject	:	Chemistry (First Class with Distinction 80%)
Research experience	:	15 years
Number of papers published	:	**260**

- **Best paper award**
  - "**International Conference on Spectrophysics"** organized by Pachaiyappa's College, Chennai, India
  - **"Tenth National Seminar on Crystal Growth"** organized by Kongu Engineering College, Erode, India during JAN 27-29, 2005.

- **Fellowship**

  Award of AICTE - National Doctoral Fellowship (NDF)- 4 years (2004-2008)

Research papers published in International Journals

Update 2021/11/30

					2021	2020	2019	2018	2017	2016	
已發表					**27**	**24**	**26**	**29**	**23**	**18**	
累計已發表						217	193	167	138	115	
	2015	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**	**2008**	**2007**	**2006**	**2005-2004**
已發表	**24**	**14**	**14**	**7**	**3**	**2**	**7**	**10**	**7**	**7**	**2**
累計已發表	97	73	59	45	38	35	33	26	16	9	

(2021)

1. Silicon-based two-dimensional chalcogenide of p-type semiconducting silicon telluride nanosheets for ultrahigh sensitive photodetector applications, 2021, Chang-Yu Lin, Rajesh Kumar Ulaganathan, **Raman Sankar***, Raghavan Chinnambedu Murugesan, Ambika Subramanian, Alex Rozhin, Shaik Firdoz, *J. Mater. Chem. C*, 9, 10478.

2. A Bi-Anti-Ambipolar Field Effect Transistor, 2021, Christy Roshini Paul Inbaraj, Roshan Jesus Mathew, Rajesh Kumar Ulaganathan, **Raman Sankar**, Monika Kataria, Hsia Yu Lin, Yit-Tsong Chen, Mario Hofmann, Chih-Hao Lee, Yang-Fang Chen, *ACS Nano*, 15, 8686-8693. (MOST-108-2112-M-001-049 -MY2)

3. Magnetic Properties of Honeycomb Spin Lattice Compounds $Na_2M_2TeO_6$ (M= Co, Ni) and Spin Dimer Compound $Na_2Cu_2TeO_6$ Single Crystals by Flux-Growth, 2021, Tahir Murtaza, Raju Kalaivanan, G Madeswaran, Khasimsaheb Bayikadi, **Raman Sankar***, *J. Mater. Res. Technol*., 14,1601-1608. (MOST-108-2112-M-001 -049 -MY2)

4. Evidence for largest room temperature magnetic signal from Co^{2+} in antiphase-free & fully inverted $CoFe_2O_4$ in multiferroic-ferrimagnetic $BiFeO_3$-$CoFe_2O_4$ nanopillar thin films, 2021, Xiao Wang, Zhiwei Hu, Stefano Agrestini, Javier Herrero-Martín, Manuel Valvidares, **Raman Sankar**, Fang-Cheng Chou, Ying-Hao Chu, Arata Tanaka, Liu Hao Tjeng, Eric Pellegrin, *Journal of Magnetism and Magnetic Materials*, 530, 167940. (MOST-108-2112-M-001 -049 -MY2)

5. The effect of Mg content and milling time on the solid solubility and microstructure of Ti–Mg alloys processed by mechanical milling, 2021, Song Jeng Huang, Adil Muneeb, Aqeel Abbas, **Raman Sankar*,** *Journal of Materials Research and Technology*, 11, 1424-1433.

6. Direct Investigation of the Reorientational Dynamics of A-site Cations in 2D Organic-Inorganic Hybrid Perovskite by Solid-State NMR, 2021, Cheng-Chieh

Lin, Shing-Jong Huang, Pei-Hao Wu, Tzu-Pei Chen, Chih-Ying Huang, Ying-Chiao Wang, Po-Tuan Chen, Vladimir Gelev, **Raman Sankar**, Chun-Wei Chen, Tsyr-Yan Yu, *10.21203/rs.3.rs-183259/v1* **(Accepted)**

7. High magnetic anisotropy and magnon excitations in single crystals of the double spin chain compound $PbMn_2Ni_6Te_3O_{18}$, 2021, I Panneer Muthuselvam, K Saranya, Florian Büscher, Dirk Wulferding, Peter Lemmens, Wei-tin Chen, **Raman Sankar**, *Phys. Rev. B*, 103, 064401. (MOST-108-2112-M-001 -049 -MY2)

8. Magnetic and structural dimer networks in layered $K_2Ni(MoO_4)_2$, 2021, G Senthil Murugan, K Ramesh Babu, **Raman Sankar**, WT Chen, I Panneer Muthuselvam, Sumanta Chattopadhyay, K-Y Choi, *Phys. Rev. B*, 103, 024451. (MOST-108-2112-M-001 -049 -MY2)

9. Internal and External Pressure Effects on Superconductivity in FeTexSe1-x (x= 0.46, 0.54) Single Crystals, 2021, Govindaraj Lingannan, Kalaiselvan Ganesan, Sathiskumar Mariappan, **Raman Sankar**, Y Uwatoko, S Arumugam, *J SUPERCOND NOV MAGN*, 34, 725–731.

10. Revealing the Quasi-Periodic Crystallographic Structure of Self-Assembled $SnTiS_3$ Misfit Compound, 2021, Nitul S Rajput, Hionsuck Baik, Jin-You Lu, Srinivasa Reddy Tamalampudi, **Raman Sankar**, Amal Al Ghaferi, Matteo Chiesa, *J. Phys. Chem. C*, 125, 18, 9956–9964. (MOST-108-2112-M-001 -049 -MY2)

11. Engineering an Indium Selenide van der Waals Interface for Multilevel Charge Storage, 2021, Yi-Ying Lu, Yu-Ting Peng, Yan-Ting Huang, Jia-Ni Chen, Jie Jhou, Liang-Wei Lan, Shi-Hao Jian, Chien-Cheng Kuo, Shang-Hsien Hsieh, Chia-Hao Chen, **Raman Sankar**, Fang-Cheng Chou, *ACS Appl. Mater. Interfaces*, 13, 3, 4618–4625. (MOST-108-2112-M-001 -049 -MY2)

12. Water-assisted spin-flop antiferromagnetic behaviour of hydrophobic Cu-based metal–organic frameworks, 2021, Arif I Inamdar, Batjargal Sainbileg, Saqib Kamal, Khasim Saheb Bayikadi, **Raman Sankar**, Tzuoo Tsair Luo, Michitoshi Hayashi, Ming-Hsi Chiang, Kuang-Lieh Lu, *Dalton Trans.*, 50, 5754-5758. (MOST-108-2112-M-001 -049 -MY2)

13. Assessing the stability of Cd_3As_2 Dirac semimetal in humid environments: the influence of defects, steps and surface oxidation, 2021, Yanxue Zhang, Silvia Nappini, **Raman Sankar**, Federica Bondino, Junfeng Gao, Antonio Politano, *J. Mater. Chem. C*, 9, 1235-1244.

14. Staggered band offset induced high performance opto-electronic devices: Atomically thin vertically stacked GaSe-SnS_2 van der Waals pn heterostructures, 2021, Packiyaraj Perumal, Rajesh Kumar Ulaganathan, **Raman Sankar**, Ling Zhu, *Applied Surface Science*, 535, 1, 147480.

15. Two-Dimensional Layered $NiLiP_2S_6$ Crystals as an Efficient Bifunctional Electrocatalyst for Overall Water Splitting, 2021, Song-Jeng Huang, Adil Muneeb, Palani Sabhapathy, Khasim Saheb Bayikadi, Tahir Murtaza, Kalaivanan Raju, Li-Chyong Chen, Kuei-Hsien Chen, **Raman Sankar***, *Catalysts*, 11, 7, 786. (MOST-108-2112-M-001 -049 -MY2)

16. Multistage development of anisotropic magnetic correlations in the Co-based honeycomb lattice $Na_2Co_2TeO_6$, 2021, CH Lee, S Lee, YS Choi, ZH Jang, R Kalaivanan, **Raman Sankar***, K-Y Choi, *Physical Review B*, 103, 21, 214447. (MOST-108-2112-M-001 -049 -MY2)

17. Large magnetoresistance and quantum oscillations in $Sn_{0.05}Pb_{0.95}Te$, 2021, Keshav Shrestha, Duncan Miertschin, **Raman Sankar**, Bernd Lorenz, Ching W Chu, *J. Phys. Condens. Matter*, 33, 33, 335501.

18. Switching of the electron-phonon interaction in 1T−VSe_2assisted by hot carriers, 2021, Paulina Majchrzak, Sahar Pakdel, Deepnarayan Biswas, Alfred JH Jones, Klara Volckaert, Igor Marković, Federico Andreatta, **Raman Sankar**, Chris Jozwiak, Eli Rotenberg, Aaron Bostwick, Charlotte E Sanders, Yu Zhang, Gabriel Karras, Richard T Chapman, Adam Wyatt, Emma Springate, Jill A Miwa, Philip Hofmann, Phil DC King, Nicola Lanatà, Young Jun Chang, Søren Ulstrup, *Physical Review B*, 103, 24, L241108. (MOST-108-2112-M-001 -049 -MY2)

19. Magnetotransport in hybrid InSe/monolayer graphene on SiC, 2021, Chih-Yuan Wang, Yun-Wu Lin, Chiashain Chuang, Cheng-Hsueh Yang, Dinesh K Patel, Sheng-Zong Chen, Ching-Chen Yeh, Wei-Chen Chen, Chia-Chun Lin, Yi-Hsun Chen, Wei-Hua Wang, **Raman Sankar**, Fang-Cheng Chou, Mattias Kruskopf, Randolph E Elmquist, Chi-Te Liang, *Nanotechnology*, 32, 15, 155704. (MOST-108-2112-M-001 -049 -MY2)

20. Tailoring the Co_4+/Co_3+ active sites in a single perovskite as a bifunctional catalyst for the oxygen electrode reactions, 2021, Song-Jeng Huang, Adil Muneeb, Palani Sabhapathy, Anji Sheelam, Khasim Saheb Bayikadi, **Raman Sankar***, *Dalton Transactions*, 21, 7212-7222 (MOST-108-2112-M-001 -049 -MY2)

21. Robust topological state against magnetic impurities observed in the superconductor PbTaSe2, 2021, Daniel Multer, Jia-Xin Yin, Songtian S. Zhang, Hao Zheng, Tay-Rong Chang, Guang Bian, **Raman Sankar**, and M. Zahid Hasan, *Phys. Rev. B*, 104, 075145.

22. Pressure-Induced Excitations in the Out-of-Plane Optical Response of the Nodal-Line Semimetal ZrSiS, 2021, Jihaan Ebad-Allah, Serto Rojewski, Marcel Vöst, Georg Eickerling, Wolfgang Scherer, E Uykur, **Raman Sankar**, L Varrassi, C Franchini, K-H Ahn, J Kuneš, CA Kuntscher, *Phys. Rev. Lett.*, 127, 076402. (MOST-108-2112-M-001 -049 -MY2)

23. Anisotropic transport in a possible quasi-one-dimensional topological candidate: TaNi2Te3, 2021, Yi Liu, Chun-Qiang Xu, Wen-He Jiao, Ping-Gen Cai, Bin Li, Wei Zhou, Bin Qian, Xue-Fan Jiang, **Raman Sankar**, Xiang-Lin Ke, Guang-Han Cao, Xiao-Feng Xu, *Tungsten*, 1-7.

24. Dirac Nodal Line and Rashba Spin-split Surface States in Nonsymmorphic ZrGeTe, 2021, Yun Yen, Cheng-Li Chiu, Ping-Hui Lin, **Raman Sankar**, Tien-Ming Chuang, Guang-Yu Guo, *New J. Phys.*,23 103019.

25. Chemical tuning of magnetic anisotropy and correlations in $Ni_{1-x}Fe_xPS_3$, 2021, Seungyeol Lee, Jaena Park, Youngsu Choi, Kalaivanan Raju, Wei-Tin Chen, **Raman Sankar***and Kwang-Yong Choi, *PHYSICAL REVIEW B*, 104, 174412. (MOST-110-2112-M-001-065-MY3)

26. Commensurate and incommensurate magnetic structure of the moderately frustrated antiferromagnet $Li_2M(WO_4)_2$ with M = Co, Ni, 2021, Sunil K Karna, CW Wang, **Raman Sankar**, D Temple, M Avdeev, *Physical Review B*, 104, 13, 134435. (MOST-110-2112-M-001-065-MY3)

27. Achieving synergistic performance through highly compacted microcrystalline rods induced in Mo doped GeTe based compounds, 2021, Safdar Imam, Khasim Saheb Bayikadi, Mohammad Ubaid, VK Ranganayakulu, Sumangala Devi, Bhalchandra S Pujari, Yang-Yuan Chen, Li-Chyong Chen, Kuei-Hsien Chen, Feng-Li Lin, **Raman Sankar***, *Materials Today Physics*, 100571. (MOST-110-2112-M-001-065-MY3)
28.

(2020)

1. Repurposing INCI-registered compounds as skin prebiotics for probiotic Staphylococcus epidermidis against UV-B, 2020, Arun Balasubramaniam, Prakoso Adi, Sunita Keshari, **Raman Sankar**, Chien-Lung Chen, Chun-Ming Huang, *Scientific Reports*, 10, 21585.

2. Thin film LiV_3O_8 nanorod formation through Pulsed Laser Deposition and the effect of heat treatment, 2020, Rojin Varghese, V Shobin Vijay, S Rajesh, A Sakunthala, P Senthil Kumar, **Raman Sankar**, *Vacuum*, 182, 109722.

3. Highly improved thermoelectric performance of BiCuTeO achieved by decreasing the oxygen content, 2020, H-C Chang, T-H Chen, **Raman Sankar**, Y-J Yang, L-C Chen, K-H Chen, *Materials Today Physics*, 15,100248.

4. Multilayer GaSe/InSe Heterointerface-Based Devices for Charge Transport and Optoelectronics, 2020, Yi-Ying Lu, Chuan-Ruei Guo, Hui-Lin Yeh, He-Wen Chen, Chien-Cheng Kuo, Jui-Hung Hsu, Jie Jhou, Yan-Ting Huang, Shang-Hsien

Hsieh, Chia-Hao Chen, Ching-Hwa Ho, **Raman Sankar**, Fang-Cheng Chou, *ACS Applied Nano Materials*, 3, 12, 11769–11776. (MOST-108-2112-M-001 -049 -MY2)

5. Experimental study of multiple magnetic transitions in micrometer and nano-grain sized Ni_3TeO_6-type oxide, 2020, I Panneer Muthuselvam, K Saranya, **Raman Sankar**, RN Bhowmik, L Kavitha, *J. Appl. Phys.*, 128, 123902. (MOST-108-2112-M-001 -049 -MY2)

6. Carbon-supported cobalt (III) complex for direct reduction of oxygen in alkaline medium, 2020, Anjaiah Sheelam, **Raman Sankar***, International Journal of Hydrogen Energy, 45 (2020), 24738-24748. (MOST-108-2112-M-001 -049 -MY2)

7. Electron-electron interactions in the two-dimensional semiconductor InSe, 2020, Arvind Shankar Kumar, Kasun Premasiri, Min Gao, U. Rajesh Kumar, **Raman Sankar**, Fang-Cheng Chou, and Xuan P. A. Gao, *Phys. Rev. B*, 102, 121301(R). (MOST-108-2112-M-001 -049 -MY2)

8. Flexible and free-standing polyvinyl alcohol-reduced graphene oxide-Cu_2O/CuO thin films for electrochemical reduction of carbon dioxide, 2020, Anjaiah Sheelam, Adil Muneeb, Biva Talukdar, Rini Ravindranath, Song-Jeng Huang, Chun-Hong Kuo, **Raman Sankar***, *Journal of Applied Electrochemistry*, 50 (9), (2020) 979-991. (MOST-108-2112-M-001 -049 -MY2)

9. Evidence for nematic superconductivity of topological surface states in $PbTaSe_2$, 2020, Tian Le, Yue Sun, Hui-Ke Jin, Liqiang Che, Lichang Yin, Guiming Pang, Chunqiang Xu, Lingxiao Zhao, Shunichiro Kittaka, Toshiro Sakakibara, Kazushige Machida, **Raman Sankar**, Huiqiu Yuan, Genfu Chen, Xiaofeng Xu, Shiyan Li, Yi Zhou, Xin Lu, *Science Bulletin*, 65 (16), 1349-1355. (MOST-108-2112-M-001 -049 -MY2)

10. Anisotropic Transport and Quantum Oscillations in the Quasi-One-Dimensional $TaNiTe_5$: Evidence for the Nontrivial Band Topology, 2020, Chunqiang Xu, Yi Liu, Pinggen Cai, Bin Li, Wen-He Jiao, Yunlong Li, Junyi Zhang, Wei Zhou, Bin Qian, Xuefan Jiang, Zhixiang Shi, **Raman Sankar**, Jinglei Zhang, Feng Yang, Zengwei Zhu, Pabitra Biswas, Dong Qian, Xianglin Ke, Xiaofeng Xu, *J. Phys. Chem. Lett*, 11,7782-7789. (MOST-108-2112-M-001 -049 -MY2)

11. Anisotropic Magnetic Properties of Nonsymmorphic Semimetallic Single Crystal NdSbTe, 2020, **Raman Sankar***, I Panneer Muthuselvam, Karthik Rajagopal, K Ramesh Babu, G Senthil Murugan, Khasim Saheb Bayikadi, K Moovendaran, Chien Ting Wu, Guang-Yu Guo, Cryst. Growth Des, 20, 6585-6591. (MOST-108-2112-M-001 -049 -MY2)

12. Fully gapped superconductivity without sign reversal in the topological superconductor $PbTaSe_2$, 2020, Yue Sun, Shunichiro Kittaka, Toshiro Sakakibara,

Kazushige Machida, **Raman Sankar**, Xiaofeng Xu, Nan Zhou, Xiangzhuo Xing, Zhixiang Shi, Sunseng Pyon, and Tsuyoshi Tamegai, *Phys. Rev. B*, 102, 024517. (MOST-108-2112-M-001 -049 -MY2)

13. Superposition of semiconductor and semi-metal properties of self-assembled 2D $SnTiS_3$ heterostructures, 2020, Srinivasa Reddy Tamalampudi, Jin-You Lu, Nitul Rajput, Chia-Yun Lai, Boulos Alfakes, **Raman Sankar**, Harry Apostoleris, Shashikant P Patole, Ibraheem Almansouri, Matteo Chiesa, *npj 2D Materials and Applications*, 4(1), (2020) 18.

14. Nickel-based Hybrid Material for Electrochemical Oxygen Redox Reactions in Alkaline Medium, 2020, Prabu Mani, Anjaiah Sheelam, Pitchiah E Karthik, **Raman Sankar**, Kothandaraman Ramanujam, Sukhendu Mandal, *ACS Appl. Energy Mater*, 3, 7, 6408–6415.

15. Magnetic and orbital correlations in multiferroic $CaMn_7O_{12}$ probed by x-ray resonant elastic scattering, 2020, K. Gautam, S. S. Majid, S. Francoual, A. Ahad, K. Dey, M. C. Rahn, **Raman Sankar**, F. C. Chou, and D. K. Shukla, *Phys. Rev. B*, 101, 224430. (MOST-108-2112-M-001 -049 -MY2)

16. Synergistic Optimization of Thermoelectric Performance in Earth-Abundant Cu_2ZnSnS_4 by Inclusion of Graphene Nanosheets, 2020, Sarita Sharma, Khasimsaheb Bayikadi, **Raman Sankar**, Sonnathi Neeleshwar, *IOP Nanotechlogy*, 31,36,365402. (MOST-108-2112-M-001 -049 -MY2)

17. Femtosecond time-evolution of mid-infrared spectral line shapes of Dirac fermions in topological insulators, 2020, Tien-Tien Yeh, Chien-Ming Tu, Wen-Hao Lin, Cheng-Maw Cheng, Wen-Yen Tzeng, Chen-Yu Chang, Hideto Shirai, Takao Fuji, **Raman Sankar**, Fang-Cheng Chou, Marin M Gospodinov, Takayoshi Kobayashi, Chih-Wei Luo, *Scientific Reports*, 10, 1, 1-8. (MOST-108-2112-M-001 -049 -MY2)

18. Modulating Charge Separation with Hexagonal Boron Nitride Mediation in Vertical Van der Waals Heterostructures, 2020, Christy Roshini Paul Inbaraj, Roshan Jesus Mathew, Rajesh Kumar Ulaganathan, **Raman Sankar**, Monika Kataria, Hsia Yu Lin, Hao-Yu Cheng, Kung-Hsuan Lin, Hung-I Lin, Yu-Ming Liao, Fang Cheng Chou, Yit-Tsong Chen, Chih-Hao Lee, Yang-Fang Chen, *ACS applied materials & interfaces*, 23, 26213-26221. (MOST-108-2112-M-001 -049 -MY2)

19. Ultralow Schottky Barriers in Hexagonal Boron Nitride-Encapsulated Monolayer WSe_2 Tunnel Field-Effect Transistors, 2020, Gaurav Pande, Jyun-Yan Siao, Wei-Liang Chen, Chien-Ju Lee, **Raman Sankar**, Yu-Ming Chang, Chii-Dong Chen, Wen-Hao Chang, Fang-Cheng Chou and Minn-Tsong Lin, *ACS Appl. Mater. Interfaces*, 12, 16, 18667–18673. (MOST-108-2112-M-001 -049 -MY2)

20. Field-free platform for Majorana-like zero mode in superconductors with a topological surface state, 2020, Songtian S. Zhang, Jia-Xin Yin, Guangyang Dai, Lingxiao Zhao, Tay-Rong Chang, Nana Shumiya, Kun Jiang, Hao Zheng, Guang Bian, Daniel Multer, Maksim Litskevich, Guoqing Chang, Ilya Belopolski, Tyler A. Cochran, Xianxin Wu, Desheng Wu, Jianlin Luo, Genfu Chen, Hsin Lin, Fang-Cheng Chou, Xiancheng Wang, Changqing Jin, **Raman Sankar**, Ziqiang Wang, and M. Zahid Hasan, *PHYSICAL REVIEW B*, 101, (R).

21. Selenium nanoparticle prepared by femtosecond laser-induced plasma shock wave, 2020, Wen-Yen Tzeng, Ya-Hsin Tseng, Tien-Tien Yeh, Chien-Ming Tu, **Raman Sankar**, Yu-Han Chen, Bang-Hao Huang, Fang-Cheng Chou, Chih-Wei Luo, *Optics Express.*, 28, 1, 685-694.

22. Influence Na in GeTe for thermoelectric applications, 2020, Jayavelu Rajeev Gandhi, **Raman Sankar**, *Materials Today: Proceedings*, 33,4332-4335.

23. Unprecedented random lasing in 2D organolead halide single-crystalline perovskite microrods, 2020, Pradip Kumar Roy, Rajesh Kumar Ulaganathan, Chinnambedu Murugesan Raghavan, Swapnil Milind Mhatre, Hung-I Lin, Wei-Liang Chen, Yu-Ming Chang, Alex Rozhin, Yun-Tzu Hsu, Yang-Fang Chen, **Raman Sankar**, Fang-Cheng Chou, Chi-Te Liang, *Nanoscale*, 12,35,18269-18277. (MOST-108-2112-M-001 -049 -MY2)

24. Synergistic optimization of thermoelectric performance of Sb doped GeTe with a strained domain and domain boundaries, 2020, Khasim Saheb Bayikadi, Chien Ting Wu, Li-Chyong Chen, Kuei-Hsien Chen*, F. C. Chou* and **Raman Sankar** *, *J. Mater. Chem. A*, 8, 10, 5332-5341. (MOST-108-2112-M-001 -049 -MY2)

(2019)

1. Electrosynthesis of carbon aerogel-modified AuNPs@ quercetin via an environmentally benign method for hydrazine (HZ) and hydroxylamine (HA) detection., 2019, Chellakannu Rajkumar, Raja Nehru, Shen-Ming Chen, Haekyoung Kim, S. Arumugame and **Raman Sankar***, *New J. Chem*, 44, 586.

2. High-Performance Flexible Broadband Photodetectors Based on 2D Hafnium Selenosulfide Nanosheets, 2019, Rajesh Kumar Ulaganathan, **Raman Sankar***, Chang-yu Lin, Raghavan Chinnambedu Murugesan, Kechao Tang, Fang-cheng Chou, *Advanced Electronic Materials*, 6, 1, 1900794.

3. Oxidized-monolayer tunneling barrier for strong Fermi-level depinning in layered InSe transistors, 2019, Yi-Hsun Chen, Chih-Yi Cheng, Shao-Yu Chen, Jan Sebastian Dominic Rodriguez, Han-Ting Liao, Kenji Watanabe, Takashi Taniguchi, Chun-Wei Chen, **Raman Sankar**, Fang-Cheng Chou, Hsiang-Chih Chiu & Wei-Hua Wang, *npj 2D Materials and Applications*, 3,1,1-7.

4. Two-gap superconductivity and topological surface states in TaOsSi, 2019, C. Q. Xu, B. Li, J. J. Feng, W. H. Jiao, Y. K. Li, S. W. Liu, Y. X. Zhou, **Raman Sankar**, Nikolai D. Zhigadlo, H. B. Wang, Z. D. Han, B. Qian, W. Ye, W. Zhou, T. Shiroka, Pabitra K. Biswas, Xiaofeng Xu, and Z. X. Shi, *Phys. Rev. B*, 100,13,134503.

5. Possible manifestations of the chiral anomaly and evidence for a magnetic field induced topological phase transition in the type-I Weyl semimetal TaAs, 2019, QR Zhang, B Zeng, YC Chiu, R Schönemann, S Memaran, W Zheng, D Rhodes, K-W Chen, T Besara, **Raman Sankar**, F Chou, GT McCandless, JY Chan, N Alidoust, S-Y Xu, I Belopolski, MZ Hasan, FF Balakirev, L Balicas, *Phys. Rev. B*, 100, 115138.

6. Crystal growth and magnetic properties of topological nodal-line semimetal GdSbTe with Antiferromagnetic spin ordering, 2019, **Raman Sankar***, I Panneer Muthuselvam, K Ramesh Babu, G Senthil Murugan, Karthik Rajagopal, Rakesh Kumar, Tsung-Chi Wu, Cheng-Yen Wen, Wei-Li Lee, Guang-Yu Guo, Fang-Cheng Chou, *Inorg. Chem*, 58, 11730-11737.

7. A chitosan grafted mesoporous carbon aerogel for ultra-sensitive voltammetric determination of isoniazid, 2019, Chellakannu Rajkumar, Raja Nehru, Shen-Ming Chen, S Arumugam, **Raman Sankar***, *Microchim Acta*, 186 (7), 1-10.

8. Sn-Doping Enhanced Ultrahigh Mobility In1-xSnxSe Phototransistor, 2019, CR Inbaraj Paul, Vijay Kumar Gudelli, Roshan Jesus Mathew, Rajesh Kumar Ulaganathan, **Raman Sankar**, Hsia Yu Lin, Hung-I Lin, Yu-Ming Liao, Hao-Yu Cheng, Kung-Hsuan Lin, Fang Cheng Chou, Yit-Tsong Chen, Chih-Hao Lee, Guang-Yu Guo, Yang-Fang Chen, ACS Appl. *Mater. Interfaces*, 11, 24269-24278.

9. Surface Reconstruction, Oxidation Mechanism, and Stability of Cd_3As2, 2019, Junfeng Gao, Anna Cupolillo, Silvia Nappini, Federica Bondino, Raju Edla, Vito Fabio, **Raman Sankar**, Yong-Wei Zhang, Gennaro Chiarello, Antonio Politano, *Adv. Funt. Mater*, 26,1900965.

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