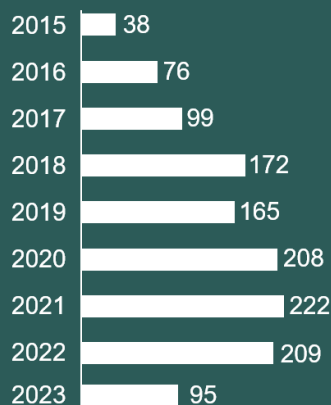




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Publication list

- Wei-Hua Li, Jhen-Dong Lin, Ping-Yuan Lo, Guan-Hao Peng, Ching-Yu Hei, **Shao-Yu Chen** and Shun-Jen Cheng*

[The key role of non-local screening in the environment-insensitive exciton fine structures of transition-metal dichalcogenide monolayers](#)

Nanomaterials **2023**, 13, 11, 1739

Special Issue: *Excitons and Phonons in Two-Dimensional Materials: From Fundamental to Applications*
- Yi-Hsun Chen, Kaijian Xing, Song Liu, Luke Holtzman, Daniel L. Creedon, Jeffrey C. McCallum, Kenji Watanabe, Takashi Taniguchi, Katayun Barnak, James Hone, Alexander R. Hamilton, **Shao-Yu Chen***, Michael S. Fuhrer*

[P-type Ohmic contact to monolayer WSe₂ field-effect transistors using high electron affinity amorphous MoO₃](#)

ACS Applied Electronic Materials **2022**, 4, 11, 5379–5386
- Naomi Tabudlong Paylaga, Chang-Ti Chou, Chia-Chun Lin, Takashi Taniguchi, Kenji Watanabe, Raman Sankar, Yang-hao Chan*, **Shao-Yu Chen***, Wei-Hua Wang*

[Monolayer indium selenide reveals bright excitons despite being an indirect-gap material](#)

(submitted to *Nano Letters*, under review)
- Chih-Yi Cheng, Wei-Liang Pai, Yi-Hsun Chen, Naomi Tabudlong Paylaga, Pin-Yun Wu, Chun-Wei Chen, Chi-Te Liang, Fang-Cheng Chou, Raman Sankar, Michael S Fuhrer, **Shao-Yu Chen***, Wei-Hua Wang*

[Phase Modulation of Self-Gating in Ionic Liquid-Functionalized InSe Field-Effect Transistors](#)

Nano Letters **2022**, 22, 2270–2276
- Iolanda Di Bernardo, James Blyth, Liam Watson, Kaijian Xing, Yi-Hsun Chen, **Shao-Yu Chen**, Mark T Edmonds, Michael Fuhrer*

[Defects, band bending and ionization rings in MoS₂](#)

Journal of Physics: Condensed Matter **2022**, 34, 174002
- Matthias Wurdack*, Tinghe Yun, Eliezer Estrecho, Nitu Syed, Semonti Bhattacharyya, Maciej Pieczarka, Ali Zavabeti, **Shao-Yu Chen**, Benedikt Haas, Johannes Mueller, Qiaoliang Bao, Christian Schneider, Yuerui Lu, Michael S Fuhrer, Andrew G Truscott, Torben Daeneke*, Elena A Ostrovskaya*

[Ultrathin Ga₂O₃ glass: a large scale passivation and protection material for monolayer WS₂.](#)

Advanced Materials **2021**, 33, 2005732
- Thomas Goldstein, Yueh-Chun Wu, **Shao-Yu Chen**, Takashi Taniguchi, Kenji Watanabe, Kalman Varga, Jun Yan*

[Ground and Excited Exciton Polarons in Monolayer MoSe₂](#)

Journal of Chemical Physics **2020**, 153, 071101

8. Thomas Goldstein, Yueh-Chun Wu, **Shao-Yu Chen**, Takashi Taniguchi, Kenji Watanabe, Kalman Varga, Jun Yan*
[Ground and Excited Exciton Polarons in Monolayer MoSe₂](#)
Journal of Chemical Physics **2020**, *153*, 071101
9. 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*
[Oxidized-monolayer tunneling barrier for strong Fermi-level depinning in layered InSe transistors](#)
npj 2D Materials and Applications **2019**, *3* (1), 1–7
10. **Shao-Yu Chen**, Zhengguang Lu, Thomas Goldstein, Jiayue Tong, Andrey Chaves, Jens Kunstmann, L. S. R. Cavalcante, Tomasz Woźniak, Gotthard Seifert, D. R. Reichman, Takashi Taniguchi, Kenji Watanabe, Dmitry Smirnov, Jun Yan*
[Luminescent Emission of Excited Rydberg Excitons from Monolayer WSe₂](#)
Nano Letters **2019**, *19* (4), 2464–2471
11. **Shao-Yu Chen**, Thomas Goldstein, Takashi Taniguchi, Kenji Watanabe, Jun Yan*
[Coulomb-bound four-and five-particle intervalley states in an atomically-thin semiconductor](#)
Nature Communication **2018**, *9*:3717
12. **Shao-Yu Chen**, Thomas Goldstein, Jiayue Tong, Takashi Taniguchi, Kenji Watanabe, Jun Yan*
[Superior valley polarization and coherence of 2s excitons in monolayer WSe₂](#)
Physical Review Letters **2018**, *120*, 046402
13. **Shao-Yu Chen**, Carl H Naylor, Thomas Goldstein, AT Charlie Johnson, Jun Yan*
[Intrinsic phonon bands in high-quality monolayer T' molybdenum ditelluride](#)
ACS Nano **2017**, *11* (1), 814–820
14. Thomas Goldstein[^], **Shao-Yu Chen**[^], Di Xiao, Ashwin Ramasubramaniam, Jun Yan*
[Raman scattering and anomalous Stokes anti-Stokes ratio in MoTe₂ atomic layers](#)
Scientific Reports **2016**, *6*, 28024
15. **Shao-Yu Chen**, Thomas Goldstein, Dhandapani Venkataraman, Ashwin Ramasubramaniam, Jun Yan*
[Activation of new Raman modes by inversion symmetry breaking in Type II Weyl semimetal candidate T'-MoTe₂](#)
Nano Letters **2016**, *16* (9), 5852–5860
16. Po-Hsiang Wang, Fu-Yu Shih, **Shao-Yu Chen**, Alvin B Hernandez, Po-Hsun Ho, Lo-Yueh Chang, Chia-Hao Chen, Hsiang-Chih Chiu, Chun-Wei Chen, Wei-Hua Wang*
[Demonstration of distinct semiconducting transport characteristics of monolayer graphene functionalized via plasma activation of substrate surfaces](#)
Carbon **2015**, *93*, 353–360
17. Yueh-Chun Wu, Cheng-Hua Liu, **Shao-Yu Chen**, Fu-Yu Shih, Po-Hsun Ho, Chun-Wei Chen, Chi-Te Liang, Wei-Hua Wang*
[Extrinsic origin of persistent photoconductivity in monolayer MoS₂ field effect transistors](#)
Scientific Reports **2015**, *5*, 11472
18. Jiayue Tong, Martin Muthee, **Shao-Yu Chen**, Sigfrid K. Yngvesson, Jun Yan*
[Antenna enhanced graphene THz emitter and detector](#)
Nano Letters **2015**, *15* (8), 5295–5301

19. **Shao-Yu Chen**, Changxi Zheng, Michael S Fuhrer, Jun Yan*
[Helicity-resolved Raman scattering of MoS₂, MoSe₂, WS₂, and WSe₂ atomic layers](#)
Nano Letters **2015**, *15* (4), 2526–2532
20. Fu-Yu Shih[^], **Shao-Yu Chen**[^], Cheng-Hua Liu, Po-Hsun Ho, Tsuei-Shin Wu, Chun-Wei Chen, Yang-Fang Chen*, Wei-Hua Wang*
[Residue-free fabrication of high-performance graphene devices by patterned PMMA stencil mask](#)
AIP Advances **2014**, *4* (6), 067129
21. **Shao-Yu Chen**, Yi-Ying Lu, Fu-Yu Shih, Po-Hsun Ho, Yang-Fang Chen, Chun-Wei Chen, Yit-Tsong Chen, Wei-Hua Wang*
[Biologically inspired graphene-chlorophyll phototransistors with high gain](#)
Carbon **2013**, *63*, 23–29
22. **Shao-Yu Chen**, Po-Hsun Ho, Ren-Jye Shiue, Chun-Wei Chen, Wei-Hua Wang*
[Transport/magnetotransport of high-performance graphene transistors on organic molecule-functionalized substrates](#)
Nano Letters **2012**, *12* (2), 964–969

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Conference Presentations

1. Unveiling Fröhlich Interactions of Rydberg Excitons on Phonon Dynamics in Monolayer Tungsten Diselenide. **8th Taiwan International Symposium on Raman Spectroscopy**
2. Efficient brightening of momentum-indirect dark excitons in ML InSe. Oral presentation at **2023 APS March Meeting**
3. Phase modulation of self-gating in ionic liquid-functionalized InSe field-effect transistors. Oral presentation at **Recent Progress in Graphene & 2D Materials Research 2022**
4. Phase modulation of self-gating in ionic liquid-functionalized InSe field-effect transistors. Oral presentation at **International Conference of the Physics of Semiconductors 2022**
5. Dark Excitons Associated Many-body Correlations in High-Quality Monolayer WS₂ and WSe₂. Oral presentation at **MRS-T International Conference 2021**
6. Long-lived populations of the dark excitons in 1L-WSe₂. Oral presentation at **2021 APS March Meeting**
7. Long-lived populations of momentum- and spin-indirect excitons in 1L-WSe₂. Oral presentation at **FLEET Annual Workshop 2020**
8. Many-body correlations of the excitonic bound-state in high-quality monolayer tungsten diselenide. Oral presentation at **Recent Progress in Graphene & 2D Materials Research 2019**
9. Luminescent Emission from 1s, 2s, 3s and 4s Excitons of Monolayer WSe₂ in High Magnetic Fields. Oral presentation at **2018 APS March Meeting**
10. The impact of inversion and mirror reflection symmetry on Raman scattering of *T'* transition metal dichalcogenides. Oral presentation at **2017 APS March Meeting**
11. Intrinsic phonon bands in high-quality monolayer *T'* molybdenum ditelluride. Oral presentation at **2016 APS March Meeting**
12. Helicity resolved Raman scattering of atomic layers of transition metal dichalcogenides. Oral presentation at **2015 APS March Meeting**
13. Hybrid graphene-organic molecule transistors with large photoresponse. Oral presentation at **2013 APS March Meeting**
14. High-performance graphene device on OTS-functionalized substrate. Oral presentation at **Annual Meeting of the Physical Society of the Republic of China 2013**
15. Transport/magnetotransport of high-performance graphene transistors on organic molecule-functionalized substrates. Oral presentation at **2012 APS March Meeting**
16. Mechanism of metal contact induced degradation in high-power LEDs. Oral presentation at the **International Conference on Optics and Photonics in Taiwan 2009**