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Publication list

1. 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*
2. Yi-Hsun Chen, Kaijian Xing, Song Liu, Luke Holtzman, Daniel L. Creedon, Jeffrey C. McCallum, Kenji Watanabe, Takashi Taniguchi, Katayun Barmak, 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
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3. 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)
4. 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*
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Ultrathin Ga₂O₃ glass: a large scale passivation and protection material for monolayer WS₂.
Advanced Materials **2021**, *33*, 2005732
7. 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*
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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*
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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*
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11. **Shao-Yu Chen**, Thomas Goldstein, Takashi Taniguchi, Kenji Watanabe, Jun Yan*
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12. **Shao-Yu Chen**, Thomas Goldstein, Jiayue Tong, Takashi Taniguchi, Kenji Watanabe, Jun Yan*
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13. **Shao-Yu Chen**, Carl H Naylor, Thomas Goldstein, AT Charlie Johnson, Jun Yan*
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14. Thomas Goldstein^, **Shao-Yu Chen**^, Di Xiao, Ashwin Ramasubramaniam, Jun Yan*
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15. **Shao-Yu Chen**, Thomas Goldstein, Dhandapani Venkataraman, Ashwin Ramasubramaniam, Jun Yan*
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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*
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19. **Shao-Yu Chen**, Changxi Zheng, Michael S Fuhrer, Jun Yan*
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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*
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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
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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**