



# Hua Shu, Hsu

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## Research Field

Spintronics · Magnetic semiconductor

## Education

PhD, Physics, National Cheng Kung University, Taiwan

## Selected Publications in Recent 5 years

1. Jun-Xiao Lin, Yu-Ren Chen, Shih-Jye Sun, Chun-Kai Hu, Bo-Jun Chen, and **Hua-Shu Hsu\***, "Field-Free Magnetoplasmon-Induced Ultraviolet Circular Dichroism Switching in Premagnetized Magnetic Nanowires.", *ACS Appl. Mater. Interfaces*, 14, 9, 11895 (2022).
2. Jun-Xiao Lin<sup>†</sup>, Jutathip Thaomonpun<sup>†</sup>, Voranuch Thongpool, Wei-Jhong Chen, Chien-Hua Huang, Shih-Jye Sun, Zdenek Remeš, Yaw-Teng Tseng, Yen-Fa Liao\*, **Hua-Shu Hsu\***, "Enhanced Photodegradation in Metal Oxide Nanowires with Co-Doped Surfaces under a Low Magnetic Field.", *ACS Appl. Mater. Interfaces*, 13, 19, 23173 (2021)
3. Tzu-Pei Chen<sup>†</sup>, Jun-Xiao Lin<sup>†</sup>, Cheng-Chieh Lin, Chi-Ying Lin, We-Chen Ke, Di-Yan Wang, **Hua-Shu Hsu\*** Chia-Chun Chen, and Chun-Wei Chen\*, "Strong Excitonic Magneto-Optic Effects in Two-Dimensional Organic-Inorganic Hybrid Perovskites.", *ACS Appl. Mater. Interfaces*, 13, 8, 10279 (2021).
4. Hai-Ping Pan, Ya-Huei Huang, **Hua-Shu Hsu\***, and Minn-Tsong Lin\*, "Tunable magnetic circular dichroism via electrochemically controlled charge-transfer transition in Ru(bpy)<sub>3</sub><sup>2+</sup> aqueous solution.", *Appl. Phys. Lett.*, 118, 032408 (2021).
5. Jun-Xiao Lin, Guan-Xun Chen, Yen-Fa Liao, Tzu-Chun Hsu, Wei-Jhong Chen, Kuo-Yi Hung, Ting-Yi Huang, Jiann-Shing Lee, Zdenek Remes, and **Hua-Shu Hsu\***, "Manipulated Optical Absorption and Accompanied Photocurrent Using Magnetic Field in Charger Transfer Engineered C/ZnO Nanowires.", *Global Challenges*, 2000025 (2020).
6. Chi Li, Sheng-Chih Hsu, Jun-Xiao Lin, Jou-Yun Chen, Kai-Chun Chuang, Yuan-Pin Chang, **Hua-Shu Hsu**, Ching-Hsiang Chen, Tien-Sung Lin, and Yi-Hsin Liu\*, "Giant Zeeman Splitting for Monolayer

- Nanosheets at Room Temperature.", *J. Am. Chem. Soc.* 142, 49, 20616 (2020).
7. Wan-Hsiu Chang Chien, Jing-Ya Huang, Jun-Xiao Lin, Yen-Fa Liao\*, Hung-Wen Su, Hsia-Ling Liang, Ssu-Yen Huang, Yeong-Der Yao, and **Hua-Shu Hsu\***, "Low Current Densities Toggle Optical Polarization Switching in Pt/Yttrium Iron Garnet Magnetic Heterostructures Using Energy Resolution.", *Phys. Status Solidi Rapid Res. Lett.*, 14, 2000223 (2020).
  8. **Hua-Shu Hsu\***, Huai-Sheng Hsu, Jun-Xiao Lin, Shih-Jye Sun, Yaw-Teng Tseng, and Zdenek Remeš, "Manipulation of the magnetoabsorption effect in Co-coated ZnO nanowires with Au decoration.", *Appl. Sur. Sci.*, 492, 591-597 (2019).
  9. Chien-Hua Huang, **Hua-Shu Hsu\***, Shih-Jye Sun, Yu-Ying Chang, Pawel Misiuna, and Lech Tomasz Baczewski, "Extraction of magnetic circular dichroism effects from blended mixture of magnetic linear dichroism signals in the cobalt/Scotch tape system.", *Sci. Rep.*, 9, 17192 (2019).
  10. **Hua-Shu Hsu\***, Yen-Chen Chang, Jing-Ya Huang, Ya-Huei Huang, Yen-Fa Liao\*, Jian-Shing Lee, Shih-Jye Sun, and Yeong-Der Yao, "Manipulation of the magneto-optical properties of a Co/C heterostructure under an applied voltage.", *Carbon*, 140, 10-16 (2018).
  11. **Hua-Shu Hsu\***, Yu-Ying Chang, Yi-Ying Chin\*, Hong-Ji Lin, Chien-Te Chen, Shih-Jye Sun\*, Sergey M. Zharkov, Chun-Rong Lin, Sergey G. Ovchinnikov, "Exchange bias in graphitic C/Co composites.", *Carbon*, 114, 642-648 (2017).
  12. **Hua-Shu Hsu\***, Syun-Long Yeh, and Keng-Wen Liu, "Room temperature large magneto-absorption effect in Co-coated ZnO nanowires.", *Appl. Phys. Lett.*, 110, 242404 (2017).
  13. **Hua Shu Hsu\***, Ssu Wei Chen, Yu Ying Chang, Chih Hao Chang, and Jiann Shing Lee, "The improvement of stable resistive switching in Al/ZnO/Al heterostructures by integration of amorphous carbon layers." *Physica status solidi (a)* 243, 1600739 (2017). (**has been selected as the Back Cover of this issue**)

## Academic Projects in Recent 5 years

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1. Controlling the Mechanism of Carrier polarization and Related Magneto-Optical Phenomena in Hybrid Semiconductor Nanostructure Studied by MCD Spectroscopy. 2019/08-2022/07 (supported by MOST, Taiwan)
2. Giant magneto-absorption effects and their applications on magneto-optoelectronics. 2018/08-2019/07 (supported by MOST, Taiwan)
3. Integrated Project for Department of Physics: The study of interface induced novel physical properties in functional carbon based composites. 2018/08-2020/07 (supported by MOST, Taiwan)

## Relevant Experience

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1. Dean of Research and Development Office, National Pingtung University, Taiwan (2020/08~)
2. Chair of Department of Applied Physics, National Pingtung University, Taiwan (2018/02-2020/07)
3. 2020 Director of the Physical Society of Taiwan
4. 2020 Director of the Taiwan Association for Magnetic Technology
5. 2020 Co-chair of Annual Meeting of the Physical Society of Taiwan

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