

# Stanford

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- Ph.D. Student in Materials Science and Engineering, admitted Autumn 2020
- Masters Student in Materials Science and Engineering, admitted Spring 2022
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### Publications

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#### PUBLICATIONS

- **Palladium Catalysts for Methane Oxidation: Old Materials, New Challenges.** *Accounts of chemical research*  
Oh, J., Boucly, A., van Bokhoven, J. A., Artiglia, L., Cargnello, M.  
2023
- **Understanding the effects of manganese and zinc promoters on ferrite catalysts for CO<sub>2</sub> hydrogenation to hydrocarbons through colloidal nanocrystals** *SURFACE SCIENCE*  
Chen, C., Oh, J., Yang, A., Zhou, C., Liccardo, G., Sapru, S., Cargnello, M.  
2024; 741
- **Low-temperature carbon dioxide conversion via reverse water-gas shift thermochemical looping with supported iron oxide** *CELL REPORTS PHYSICAL SCIENCE*  
Sun, E., Wan, G., Haribal, V., Gigantino, M., Marin-Quiros, S., Oh, J., Vailionis, A., Tong, A., Randall, R., Rojas, J., Gupta, R., Majumdar, A.  
2023; 4 (9)
- **A semi-continuous process for co-production of CO<sub>2</sub>-free hydrogen and carbon nanotubes via methane pyrolysis** *CELL REPORTS PHYSICAL SCIENCE*  
Sun, E., Zhai, S., Kim, D., Gigantino, M., Haribal, V., Dewey, O. S., Williams, S. M., Wan, G., Nelson, A., Marin-Quiros, S., Martis, J., Zhou, C., Oh, et al  
2023; 4 (4)
- **Colloidally Engineered Pd and Pt Catalysts Distinguish Surface- and Vapor-Mediated Deactivation Mechanisms** *ACS CATALYSIS*  
Oh, J., Beck, A., Goodman, E. D., Roling, L. T., Boucly, A., Artiglia, L., Abild-Pedersen, F., van Bokhoven, J. A., Cargnello, M.  
2023
- **Iron-Poor Ferrites for Low-Temperature CO<sub>2</sub> Conversion via Reverse Water-Gas Shift Thermochemical Looping** *ACS SUSTAINABLE CHEMISTRY & ENGINEERING*  
Rojas, J., Sun, E., Wan, G., Oh, J., Randall, R., Haribal, V., Jung, I., Gupta, R., Majumdar, A.  
2022
- **Sulfur-treated TiO<sub>2</sub> shows improved alcohol dehydration activity and selectivity.** *Nanoscale*  
R Riscoe, A., Oh, J., Cargnello, M.  
2022
- **Steam-created grain boundaries for methane C-H activation in palladium catalysts.** *Science (New York, N.Y.)*  
Huang, W., Johnston-Peck, A. C., Wolter, T., Yang, W. D., Xu, L., Oh, J., Reeves, B. A., Zhou, C., Holtz, M. E., Herzing, A. A., Lindenberg, A. M., Mavrikakis, M., Cargnello, et al  
2021; 373 (6562): 1518-1523
- **Transparent Pressure Sensor with High Linearity over a Wide Pressure Range for 3D Touch Screen Applications** *ACS APPLIED MATERIALS & INTERFACES*  
Choi, H., Oh, J., Kim, Y., Pyatykh, M., Yang, J., Ryu, S., Park, S.  
2020; 12 (14): 16691-16699
- **Highly Uniform and Low Hysteresis Piezoresistive Pressure Sensors Based on Chemical Grafting of Polypyrrole on Elastomer Template with Uniform Pore Size** *SMALL*  
Oh, J., Kim, J., Kim, Y., Choi, H., Yang, J., Lee, S., Pyatykh, M., Kim, J., Sim, J., Park, S.

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2019; 15 (33): e1901744

• **Microstructured Porous Pyramid-Based Ultrahigh Sensitive Pressure Sensor Insensitive to Strain and Temperature** *ACS APPLIED MATERIALS & INTERFACES*

Yang, J., Kim, J., Oh, J., Kwon, S., Sim, J., Kim, D., Choi, H., Park, S.

2019; 11 (21): 19472-19480

• **Highly Ordered 3D Microstructure-Based Electronic Skin Capable of Differentiating Pressure, Temperature, and Proximity** *ACS APPLIED MATERIALS & INTERFACES*

Kim, J., Kwon, S., Kim, Y., Choi, H., Yang, J., Oh, J., Lee, H., Sim, J., Ryu, S., Park, S.

2019; 11 (1): 1503-1511

• **Intrinsically stretchable multi-functional fiber with energy harvesting and strain sensing capability** *NANO ENERGY*

Ryu, J., Kim, J., Oh, J., Lim, S., Sim, J., Jeon, J. S., No, K., Park, S., Hong, S.

2019; 55: 348-353

• **A Highly Sensitive Bending Sensor Based on Controlled Crack Formation Integrated with an Energy Harvesting Pyramid Layer** *ADVANCED MATERIALS TECHNOLOGIES*

Lee, S., Oh, J., Yang, J., Sim, J., Ryu, J., Kim, J., Park, S.

2018; 3 (12)

• **Pressure Insensitive Strain Sensor with Facile Solution-Based Process for Tactile Sensing Applications** *ACS NANO*

Oh, J., Yang, J., Kim, J., Park, H., Kwon, S., Lee, S., Sim, J., Oh, H., Kim, J., Park, S.

2018; 12 (8): 7546-53