

**Room H #108** 13:30-15:30**[We-H2] Thermoelectric IV****Session Chairs:**

Soonil Lee (Changwon Nat'l Univ., Korea),  
Ngo Van Hong (Technical Univ. of Denmark, Denmark)

**We-H2-1 [Invited]** 13:30-14:00**High Performance Thermoelectric Materials and Modules Energy Harvesting**

Ngo Van Nong, Le Thanh Hung, and Safdar Abbas Malik  
*Technical Univ. of Denmark, Denmark*

**We-H2-2 [Invited]** 14:00-14:30**High Performance Shape Engineerable Thermoelectric Pastes**

Son Jae Sung, Fredrick Kim, Seungki Jo, and Seungjun Choo  
*UNIST, Korea*

**We-H2-3** 14:30-14:45**Design and Fabrication of Thermoelectricpower Generation System for Energy Harvesting from Exhaust Pipe**

HanKi Cho and Seungwoo Han  
*KIMM, Korea*

**We-H2-4** 14:45-15:00**Optimal Operating Conditions of the Eco-Friendly Thermoelectric Cooler Installed in Automobiles**

Da-Hye Kim<sup>1</sup>, Sijin Kim<sup>2</sup>, and Seungwoo Han<sup>1,3</sup>  
<sup>1</sup>*Univ. of Sci. and Tech., Korea*, <sup>2</sup>*TETech, Korea*, <sup>3</sup>*KIMM, Korea*

**We-H2-5** 15:00-15:15**Material Optimization for Wearable Thermoelectric Generator**

Gyusoup Lee<sup>1</sup>, Garam Choi<sup>2</sup>, Choong Sun Kim<sup>1</sup>, Yong Jun Kim<sup>1</sup>, Hyeongdo Choi<sup>1</sup>, Seongho Kim<sup>1</sup>, Hyo Seok Kim<sup>2</sup>, Won Bo Lee<sup>2</sup>, and Byung Jin Cho<sup>1</sup>  
<sup>1</sup>*KAIST, Korea*, <sup>2</sup>*Seoul Nat'l Univ., Korea*

**We-H2-6** 15:15-15:30**Wireless Sensor Node Powered by a Flexible Thermoelectric Generator for Industrial Environmental Monitoring**

Yong Jun Kim<sup>1</sup>, Byung Jin Cho<sup>1</sup>, Choong Sun Kim<sup>1</sup>, Hyeongdo Choi<sup>1</sup>, Gyusoup Lee<sup>1</sup>, Seongho Kim<sup>1</sup>, Kevin K. Yi<sup>2</sup>, and Sang Gug Lee<sup>1</sup>  
<sup>1</sup>*KAIST, Korea*, <sup>2</sup>*Tegway, Korea*

**Room I #204** 13:30-15:30**[We-I2] Design of Advanced Materials I****Session Chairs:**

Yuan Ping Feng (Nat'l Univ. of Singapore, Singapore),  
Hiroshi Mizuseki (KIST, Korea)

**We-I2-1 [Invited]** 13:30-14:00**Origin of Dirac Cone Formation in 2D Binary Materials: "Divide-and-Couple" Mechanism**

Yi Liu and Xu-Ming Qin  
*Shanghai Univ., China*

**We-I2-2** 14:00-14:15**Pressure Induced Topological Phase Transition in Layered Bi<sub>2</sub>S<sub>3</sub>**

Yuan Ping Feng<sup>1</sup>, Ming Yang<sup>2</sup>, Yongzheng Luo<sup>1</sup>, Minggang Zeng<sup>3</sup>, Lei Shen<sup>1</sup>, Yunhao Lu<sup>4</sup>, Jun Zhou<sup>1</sup>, Shijie Wang<sup>2</sup>, and lam Keong Sou<sup>5</sup>  
<sup>1</sup>*Nat'l Univ. of Singapore, Singapore*, <sup>2</sup>*Inst. of Materials Research and Engineering, Singapore*, <sup>3</sup>*Data Storage Inst., Singapore*, <sup>4</sup>*Zhejiang Univ., China*, <sup>5</sup>*The Hong Kong Univ. of Sci. and Tech., China*

**We-I2-3** 14:15-14:30**New Structure Prediction of Novel Carbon Phases based on a Multi-Start Local Search Approach**

Hiroshi Mizuseki and Babu Ram  
*KIST, Korea*

**We-I2-4 [Invited]** 14:30-15:00**Triply Degenerate Nodal Point Semimetals**

Hongming WENG  
*CAS, China*

**We-I2-5** 15:00-15:15**DFT-based Modeling of Crystalline  $\gamma$ -Al<sub>2</sub>O<sub>3</sub>/ $\beta$ -Ga<sub>2</sub>O<sub>3</sub> Interface**

Junsung Park and Sung-Min Hong  
*GIST, Korea*

**We-I2-6** 15:15-15:30**Comparison of Empirical Potentials for Calculating Structural Properties of Amorphous Carbon Films by Molecular Dynamics Simulation**

Xiaowei Li and Kwang-Ryeol Lee  
*KIST, Korea*