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**-Profile-** I was born and brought up in China--- in the famous "City of Mountains": Chongqing. I received my Bachelor of Engineering (1982) in Material Science at Harbin Institute of Technology, Harbin, Master of Engineering (1984) in Material Science at Harbin Institute of Technology, Harbin, and D. Eng. (1993) in Composite Materials at Hiroshima University, Hiroshima, Japan.

### -Education-

1978.3-1982.1 School of Material Science and Engineering, Harbin Institute of Technology (HIT)  
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Material Science (Metallic Materials and heat treatment), B. Eng.  
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### -Experience-

1984.12-1988.10 College of Materials Science and Engineering, Chongqing University  
Chingqing, 400045, China  
Metallic Materials Science and Engineering, Assistant Professor  
1993.4-2002.3 Faculty of Engineering, Chiba University  
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Materials Science (Composite materials, Powder metallurgy, Functional Materials), Assistant Professor  
2002.4- Graduate School & Faculty of Engineering, Chiba University  
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Materials Science (Metal oxides Materials, Thermoelectrics, Photocatalyst), Professor

### -Research field-

- Environment & New Energy Materials, Composite, Nano-technology, Spark Plasma Sintering, Mechanical Coating Technique
- Thermoelectrics of Oxides: Non-stoichiometric Titanium Dioxide,  $TiO_{2-x}$ ,  $Ni_{1-x}M_xO$  ( $M=Li, Na$ ),  $CuAlO_2$
- Composite Thermoelectrics:  $Ti/TiO_{2-x}$ ,  $Cu/TiO_{2-x}$ ,  $Cu/CuAlO_2$
- Mechanical Coating Technique (MCT)
- $TiO_2$  Photocatalyst, Composite Film,  $Ti/TiO_2$  Film Photocatalyst
- $Ti/TiO_2$  Composite Photocatalyst

### -Publication (Papers from 2012)

1	Influence of oxidation process on photocatalytic activity of photocatalyst coatings by mechanical coating technique: <b>Yun Lu</b> , Kouta Kobayashi, Sujun Guan, Liang Hao, Hiroyuki Yoshida, Hiroshi Asanuma, Jinxiang Chen, <i>Materials Science in Semiconductor Processing</i> , Vol.30, 128–134(2015).
2	The microstructure of paper after heat-induced inkless eco-printing and its features: Chen, J., Xie, J., Pan, L., Wang, X., Xu, L., <b>Lu, Y.</b> , <i>Journal of Wood Chemistry and Technology</i> , Vol.34, No.3, 202-210 (2014).
3	Titanium dioxide–nickel oxide composite coatings: Preparation by mechanical coating/thermal oxidation and photocatalytic activity: <b>Yun Lu</b> , Liang Hao, Kou Matsuzaka, Hiroyuki Yoshida, Hiroshi Asanuma, Jinxiang Chen, Fusheng Pan, <i>Materials Science in Semiconductor Processing</i> , Vol.24, 138–145(2014).
4	$Ti_{1-x}Cr_xO_2$ の作製およびその組織と熱電特性の解析: 相楽勝裕, <b>魯 云</b> , 菊池優汰, 野末貴裕, 小椋 慧, 吉田浩之, 浅沼 博, <i>日本金属学会誌</i> , Vol.78, No.3, 109-116(2014).



5	Technological Parameters and Design of Bionic Integrated Honeycomb Plates: Chenglong Gu, Jianxun Liu, Jinxiang Chen, Chenglin He, <b>Yun Lu</b> and Yong Zhao, <i>Journal of Bionic Engineering</i> , Vol.11, 134-143(2014).
6	Cu/TiO <sub>2-x</sub> 複合熱電材料の特性解析—有限要素法および実験による高性能化の検討—: 相楽勝裕, <b>魯云</b> , 野末貴裕, 小椋 慧, 吉田浩之, 浅沼 博, <i>材料の科学と工学</i> , Vol.51, No.3, 99-106(2014).
7	Fabrication and Photocatalytic Activity of Photocatalyst Coatings by Mechanical Coating Technique and the Oxidation at Relatively Low Temperatures: <b>Yun Lu</b> , Liang Hao, Kohta Kobayashi, Hiromasa Sato, Hiroyuki Yoshida, Sujun Guan and Jinxiang Chen, <i>Advanced Materials Research</i> , (2014). (in press)
8	Preparation and Photocatalytic Activity of TiO <sub>2</sub> -Copper Oxides Composite Coatings by Mechanical Coating Technique and Heat Oxidation: <b>Yun Lu</b> , Liang Hao, Kou Matsuzaka, Hiroyuki Yoshida, Sujun Guan and Jinxiang Chen, <i>Advanced Materials Research</i> , (2014). (in press)
9	Photocatalytic activity of TiO <sub>2</sub> /Ti composite coating fabricated by mechanical coating technique and subsequent heat oxidation: <b>Yun Lu</b> , Kou Matsuzaka, Liang Hao, Yutaka Hirakawa, Hiroyuki Yoshida and Fesheng Pan, <i>Materials Science in Semiconductor Processing</i> , Vol.16, No.6, 1949-1956(2013).
10	Analysis on energy transfer during mechanical coating and ball milling—Supported by electric power measurement in planetary ball mill: Liang Hao, <b>Yun Lu</b> , Hiromasa Sato, Hiroshi Asanuma and Jie Guo, <i>International Journal of Mineral Processing</i> , Vol.121, 51-58(2013).
11	Effect of substrate temperature on optical properties and strain distribution of ZnTe epilayer on (100) GaAs substrates: Lei Zhang, Ziwu Ji, Shulai Huang, Huining Wang, Hongdi Xiao, Yujun Zheng, Xiangang Xu, <b>Yun Lu</b> and Qixin Guo, <i>Thin Solid Films</i> , Vol.536, 240-243(2013).
12	Enhancement of the Mechanical Properties of Basalt Fiber-Wood-Plastic Composites via Meleic Anhydride Grafted High-Density Polyethylene (MAPE) Addition: Jinxiang Chen, Yong Wang, Chenglong Gu, Jianxun Liu, Yufu Liu, Min Li, <b>Yun Lu</b> , <i>Materials</i> , Vol.6, No.6, 2483-2496(2013).
13	溶融塩処理による可視光応答型 TiO <sub>2</sub> 光触媒の作製およびその機能評価: 平川 寛, <b>魯云</b> , 吉田浩之, 松坂 効, カクリヨウ, 佐藤寛将: <i>日本金属学会誌</i> , Vol.77, No.7, 287-293(2013).
14	Improvement in Thermoelectric Properties of Non-Stoichiometric Titanium Dioxide by Reduction Treatment: <b>Yun Lu</b> , Liang Hao, Katsuhiro Sagara, Hiroyuki Yoshida and Yingrong Jin, <i>Materials Transactions</i> , Vol.54 No.10, 1981-1985(2013).
15	Influence of metal properties on the formation and evolution of metal coatings during mechanical Coating: Liang Hao, <b>Yun Lu</b> , Hiromasa Sato, Hiroshi Asanuma, Jie Guo, <i>Metallurgical and Materials Transactions A</i> , Vol. 44, No. 6, 2717-2724 (2013).
16	Effect of Cu powder addition on thermoelectric properties of Cu/TiO <sub>2-x</sub> composites: <b>Yun Lu</b> , Katsuhiro Sagara, Yusuke Matsuda, Liang Hao, Ying Rong Jin, Hiroyuki Yoshida, <i>Ceramics International</i> , Vol.39, No.6, 6689-6694 (2013).
17	Improvement of Thermoelectric Properties of CuAlO <sub>2</sub> by Excess Oxygen Doping in Annealing: <b>Yun Lu</b> , Kazunari Maeda, Katsuhiro Sagara, Liang Hao and Yingrong Jin, <i>Materials Science Forum</i> , Vol.750, 134-137 (2013).
18	FEM Analysis on Thermoelectric Properties of Metal/TiO <sub>2-x</sub> Composites with Random Distribution of Metal Powder: Katsuhiro Sagara, <b>Yun Lu</b> and Daocheng Luan, <i>Materials Science Forum</i> , Vol.750, 130-133(2013).
19	Influence of intermittent air introduction on formation of Zn films by mechanical coating technique: Liang Hao, <b>Yun Lu</b> , Hiromasa Sato, Hiroshi Asanuma and Fusheng Pan, <i>Materials Science Forum</i> , Vol.750, 138-141(2013).
20	A study of the residual stress and its influence on tensile behaviors of fiber-reinforced SiC/Al composite: <b>Yun Lu</b> , Liang Hao, Fusheng Pan, Jinxiang Chen, Mitsuji Hirohashi, <i>Advanced Composite Materials</i> , Vol.22, No.4, 255-263(2013).



21	Fabrication and characteristics of visible light active TiO <sub>2</sub> films by reduction treatment in carbon powder: <b>Yun Lu</b> , Liang Hao, Kou Matsuzaka, Fusheng Pan, Hiroyuki Yoshida, <i>Materials Technology</i> , Vol.28, No.4, 205-213(2013).
22	Fabrication and Thermoelectric Properties of Magneli Phases by Adding Ti into TiO <sub>2</sub> : <b>Yun Lu</b> , Yusuke Matsuda, Katsuhiro Sagara, Liang Hao, Takahito Otomitsu and Hiroyuki Yoshida, <i>Advanced Materials Research</i> , Vols.415-417, 1291-1296(2012).
23	Fabrication of TiO <sub>2</sub> /Cu composite photocatalyst thin film by 2-step Mechanical Coating Technique and its photocatalytic activity: <b>Yun Lu</b> , Liang Hao, Keisuke Toh and Hiroyuki Yoshida, <i>Advanced Materials Research</i> , Vols.415-417, 1942-1948(2012).
24	The influence of the processing parameters on the formation of iron thin films on alumina balls by mechanical coating technique: Liang Hao, <b>Yun Lu</b> , Hiroshi Asanuma and Jie Guo, <i>Journal of Materials Processing Technology</i> , Vol.212, No.5, 1169-1176(2012).
25	Reaction behaviour of Ni <sub>1-x</sub> M <sub>x</sub> O's (M = Li, Na) formation and its thermoelectric properties: <b>Yun Lu</b> , Liang Hao, Hiroyuki Yoshida, Mitsuji Hirohashi, <i>Journal of Materials Science: Materials in Electronics</i> , Vol. 23, No. 1, 315-319 (2012).
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27	Fabrication of zinc coatings on alumina balls from zinc powder by mechanical coating technique and the process analysis: Liang Hao, <b>Yun Lu</b> , Hiromasa Sato, Hiroshi Asanuma, <i>Powder Technology</i> , Vol.228, 377-384(2012).
28	Fabrication of Non-stoichiometric Titanium Dioxide by Spark Plasma Sintering and Its Thermoelectric Properties: <b>Yun Lu</b> , Katsuhiro Sagara, Liang Hao, Ziwu Ji and Hiroyuki Yoshida, <i>Materials Transactions</i> , Vol.53, No.7, 1208-1211(2012).
29	Fabrication of Ni coatings by mechanical coating technique: Liang Hao, <b>Yun Lu</b> , Hiromasa Sato, Hiroyuki Yoshida, <i>Journal of Engineering and Technology</i> , Vol.1, No.1, 131-134(2012).
30	Antibacterial activity of TiO <sub>2</sub> /Ti composite photocatalyst films treated by ultrasonic cleaning: <b>Yun Lu</b> , Liang Hao, Yutaka Hirakawa, Hiromasa Sato, <i>Advances in Materials Physics and Chemistry</i> , Vol.2, No. 4B, 9-12(2012).