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Education:

1990 Ph.D. University of Houston
1978 B.S. Tamkang University

Employment History:

1993-present Associate Professor of Physics, University of Houston
1991-1993 Assistant Professor of Physics, University of Houston
1990-1992 Associate Director for Material Research, Texas Center for Superconductivity
1988-1990 Associate Director for Science, Texas Center for Superconductivity
1987-1991 Visiting Assistant Professor of Physics, University of Houston

Lab Facilities/Expertise:

Experimental Probes:

1. Magnetic Studies: SQUID and ac susceptometer.
2. Transport Studies: resistivity, thermoconductivity, thermopower...etc, under high pressure, high magnetic field and cryogenic temperature.
3. Optical Studies: ac conductivity, dielectric constant as a function of temperature.
4. Material Characterization: X-Ray, SEM and EDAX.
5. Thermal Analysis/Characterization: DSC, DTA, TGA and Gas Effusion.

Materials Preparation:

1. Thin Films: DC & RF sputtering system; Evaporation system.
2. Crystallox CGS-5 single crystal growth system.
3. Edmund Buhler fast quenching furnace and various box, tube and induction furnaces.
4. EG&G Model 283,263 potentiostats and electrochemical cells.
5. Morris Research HPS-P7 high temperature, high oxygen pressure annealing furnace.

Five Most Recent Publications:

1. Quantitative connection between the nanoscale electronic inhomogeneity and the pseudogap of $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ superconductors, T. Honma & P.H. Hor, *Physica C* 509, 11-15 (2015).
2. Implications of Charge Ordering in the High T_c Cuprate Superconductors in the Far-infrared Spectroscopy, Y. H. Kim and P. H. Hor, *Journal of Physics: Condensed Matter* 25, 355702 (2013).
3. Unconventional magnetic phase diagram of cuprate superconductor $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ at quantum critical point $x = 1/9$, X. L. Dong, P. H. Hor, F. Zhou, Z. X. Zhao, *Solid State Communications* 152, 1513-1517 (2012).
4. Unified electronic phase diagram for hole doped high T_c cuprates, T. Honma & P. H. Hor, *Phys. Rev. B* 77, 184520 (2008).
5. Charge crystal model for the high- T_c superconductivity, Kim, Y. H. and Hor, P. H., *Mod. Phys. Lett. B* 20(10), 571-584 (2006).