

# Advancing Materials Characterization



Lake Shore offers ▶  
precision platforms  
for materials research



## THz Material Characterization System

A non-contact measurement system that uses THz-frequency energy to measure across a wide range of frequencies, temperatures, and field strengths

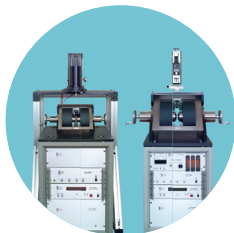
**Ideal for:** semiconductor materials • complex oxide systems • thin films • superconducting metamaterials • 2D materials



## Hall Effect Measurement Systems

Robust hardware/software systems for performing DC field Hall measurements with options for AC field Hall, high or low resistances, and variable temperature

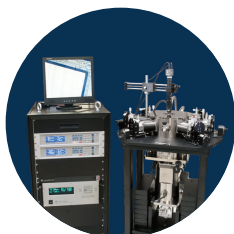
**Ideal for:** ZnO & other transparent conducting oxides • metal oxides • III-V, II-VI, & elemental semiconductors • complex oxide systems



## VSMs/AGMs

High-sensitivity electromagnet-based systems for accurately characterizing magnetic materials over a wide range of temperatures and fields to >3 T

**Ideal for:** magnetic thin films & multi-layers • magnetic nanomaterials • permanent magnets, including rare earth materials • MCE materials



## Cryogenic Probe Stations

Micro-manipulated stations for non-destructive on-wafer probing and measurement of materials in a tightly controlled environment

**Ideal for:** transition metal dichalcogenide & 2D material transistors • CNT & nanowire devices • GaN & other wide-bandgap devices • MEMS



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<b>H</b>																	<b>He</b>
<b>Li</b>	<b>Be</b>											<b>B</b>	<b>C</b>	<b>N</b>	<b>O</b>	<b>F</b>	<b>Ne</b>
<b>Na</b>	<b>Mg</b>											<b>Al</b>	<b>Si</b>	<b>P</b>	<b>S</b>	<b>Cl</b>	<b>Ar</b>
<b>K</b>	<b>Ca</b>	<b>Sc</b>	<b>Ti</b>	<b>V</b>	<b>Cr</b>	<b>Mn</b>	<b>Fe</b>	<b>Co</b>	<b>Ni</b>	<b>Cu</b>	<b>Zn</b>	<b>Ga</b>	<b>Ge</b>	<b>As</b>	<b>Se</b>	<b>Br</b>	<b>Kr</b>
<b>Rb</b>	<b>Sr</b>	<b>Y</b>	<b>Zr</b>	<b>Nb</b>	<b>Mo</b>	<b>Tc</b>	<b>Ru</b>	<b>Rh</b>	<b>Pd</b>	<b>Ag</b>	<b>Cd</b>	<b>In</b>	<b>Sn</b>	<b>Sb</b>	<b>Te</b>	<b>I</b>	<b>Xe</b>
<b>Cs</b>	<b>Ba</b>	<b>La</b>	<b>Hf</b>	<b>Ta</b>	<b>W</b>	<b>Re</b>	<b>Os</b>	<b>Ir</b>	<b>Pt</b>	<b>Au</b>	<b>Hg</b>	<b>Tl</b>	<b>Pb</b>	<b>Bi</b>	<b>Po</b>	<b>At</b>	<b>Rn</b>
<b>Fr</b>	<b>Ra</b>	<b>Ac</b>	<b>Rf</b>	<b>Db</b>	<b>Sg</b>	<b>Bh</b>	<b>Hs</b>	<b>Mt</b>	<b>Ds</b>	<b>Rg</b>	<b>Cn</b>	<b>Uut</b>	<b>F1</b>	<b>Uup</b>	<b>Lv</b>	<b>Uus</b>	<b>Uuo</b>

<b>Ce</b>	<b>Pr</b>	<b>Nd</b>	<b>Pm</b>	<b>Sm</b>	<b>Eu</b>	<b>Gd</b>	<b>Tb</b>	<b>Dy</b>	<b>Ho</b>	<b>Er</b>	<b>Tm</b>	<b>Yb</b>	<b>Lu</b>
<b>Th</b>	<b>Pa</b>	<b>U</b>	<b>Np</b>	<b>Pu</b>	<b>Am</b>	<b>Cm</b>	<b>Bk</b>	<b>Cf</b>	<b>Es</b>	<b>Fm</b>	<b>Md</b>	<b>No</b>	<b>Lr</b>

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