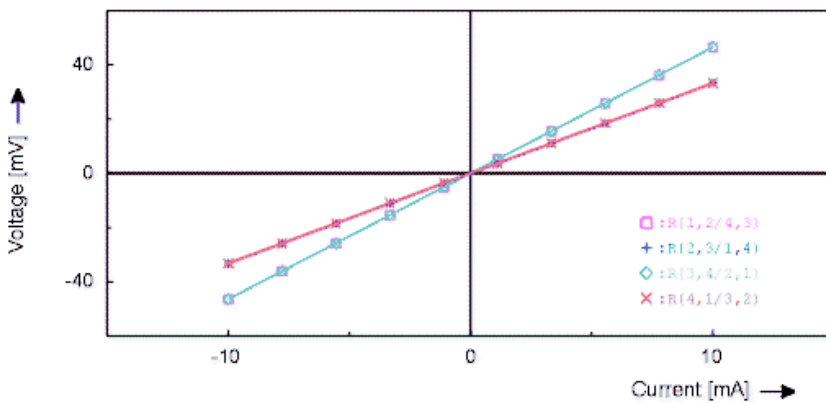
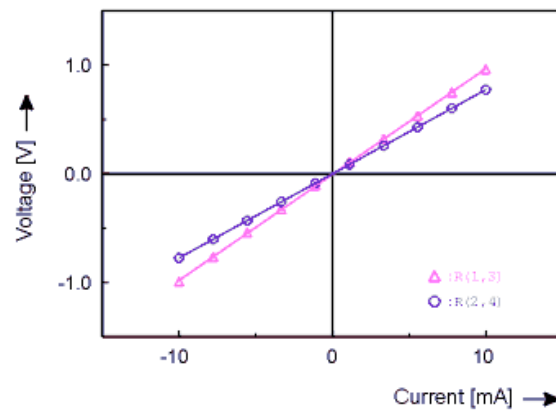
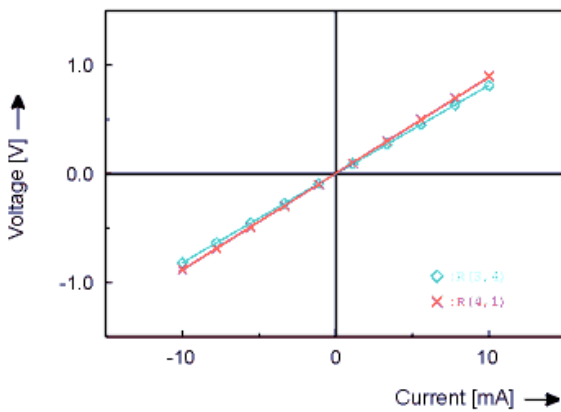
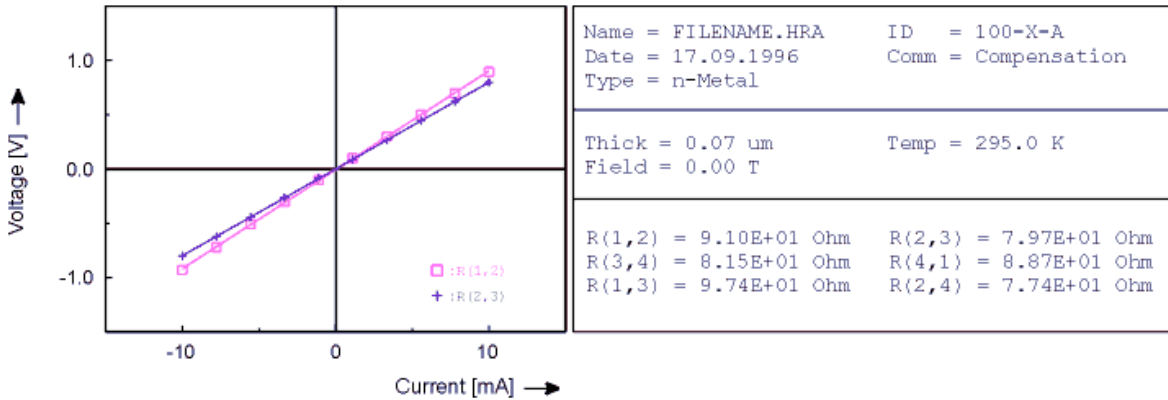


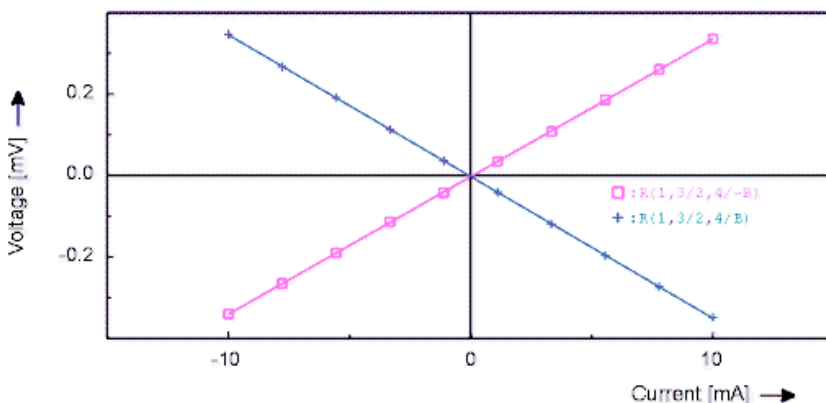
PhysTech RH2035 霍尔效应测试仪器

1.	设备名称:	霍尔效应测试仪
2.	功能描述:	测量半导体薄膜中载流子类型、载流子浓度、迁移率、电阻率、霍尔系数等参数
3.	技术参数:	
3-1	测试范围:	Si, SiGe, SiC, GaAs, InGaAs, InP, GaN (N Type & P Type)等材质的半导体薄膜中载流子类型、载流子浓度、迁移率、电阻率、霍尔系数等参数
3-2	磁场:	
3-2-1	磁场强度:	0.45T 永磁体
3-2-2	磁场类型:	永磁体
3-2-3	磁场均匀性:	磁场不均匀性 $\leq \pm 1\%$ 10年内磁场变化 $\leq \pm 0.2\%$
3-3	温度:	
3-3-1	温度区域:	77K(液氮温度)或室温
3-4	电阻率范围:	1 μ Ohm*cm ~10 M Ohm*cm
3-5	电阻范围:	0.1 m Ohms ~10 G Ohms
3-6	载流子浓度:	$10^7 \sim 10^{21} \text{ cm}^{-3}$
3-7	迁移率:	$10^{-2} \sim 10^7 \text{ cm}^2/\text{volt} \cdot \text{sec}$
3-8	输入电流:	
3-8-1	电流范围:	1000 pA~10mA
3-8-2	电流解析度:	2.5 pA (lowest range)
3-8-3	电流精度:	2%
3-9	输入电压:	
3-9-1	电压范围:	$\pm 10\text{V}$
3-9-2	电压分辨率:	1 μ V
4.	仪器特点:	
4-1	Automatic contact check 自动接触检查(欧姆接触)	
4-2	Routine and enhanced software 常规和增强软件	
4-3	Differential resistivity measurements by I/V-curves I/V曲线测试电阻率差异	
4-4	Misalignment voltage compensation 失调电压补偿	
4-5	Correction of slow sample drift voltage, especially for ZnO, 修正慢样品漂移电压, 特别是氧化锌	
4-6	Automatic field calibration 自动现场标定	
4-7	Large concentration and resistivity range 大浓度和电阻率范围	
4-8	Flexible, modular hardware 灵活的模块化硬件	

4-9	Support of various magnets, for example BioRad HL 5200 支持多样磁场
4-10	Support of various temperature controllers 支持各种温度控制器(支持客户自行升级变温系统)
5	硬件
5-1	The standard system consists of a bench top electronic system, a small magnet and a sample stage for room temperature and LN2 measurements. 标准系统包含电子测试系统、磁场和两个温度区域的测试平台（室温和液氮温度）
5-2	The electronics include the current source, the voltage measurement part, the contact switching module and the IEEE or RS232 interface. It is completely micro processor controlled. 电子测试系统包括由单片机控制的电流源、电压测试、接触开关模块、IEEE或RS232接口
5-3	The contact switching module is designed to allow all possible measurement configurations. 接触开关模块支持所有用户用于其他的配置(用户可以采用制冷机做变温霍尔测试)
5-4	The current source has adjustable limits for voltage and/or power. {+++} 电流源具有可调电压和/或电源的限制
5-5	Voltage measurement provides different input amplifiers optimized for either low current or low voltage applications. 电压测量提供了不同的输入放大器或低电流或低电压应用的优化。
6	软件



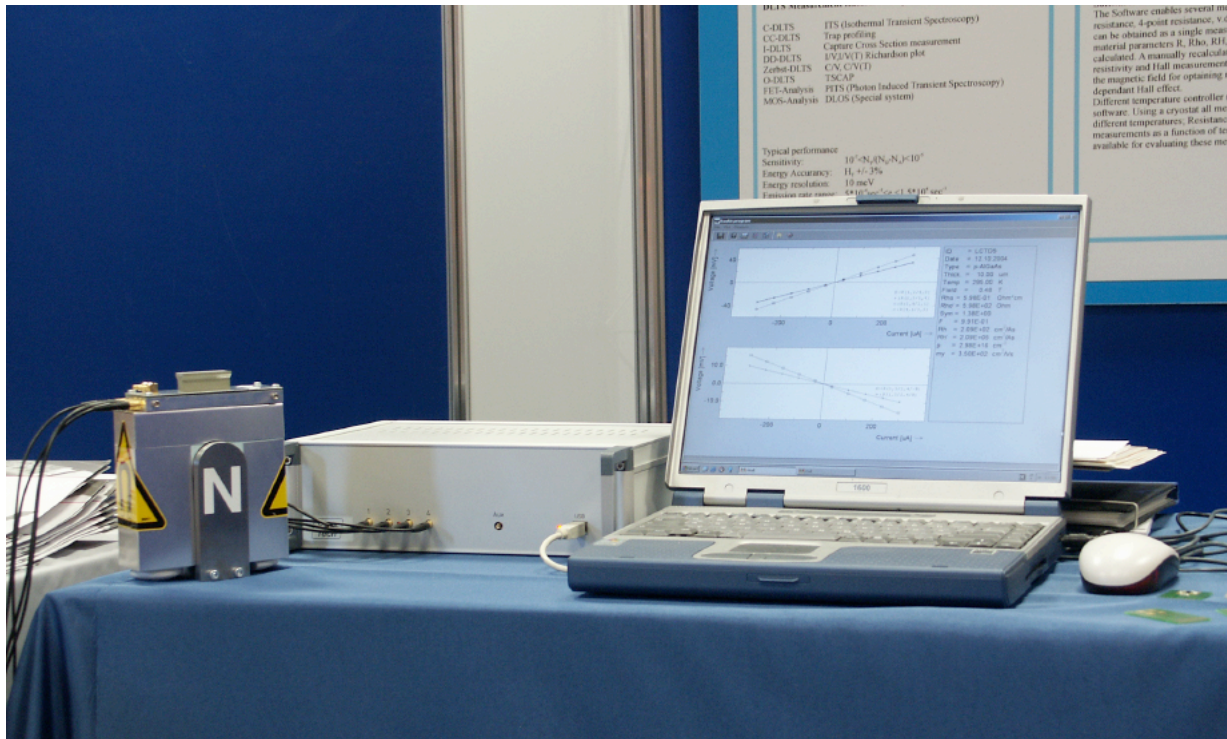
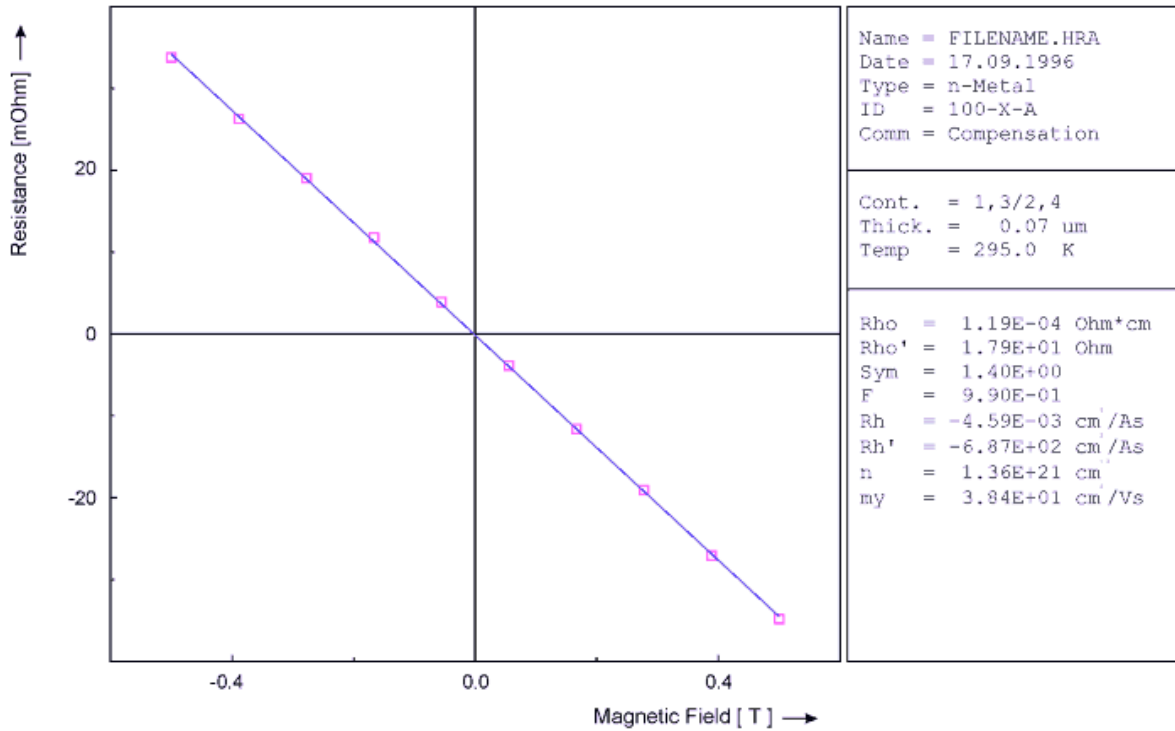
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Rh = -4.58E-03 cm ² /As	
Rh' = -6.86E+02 cm ² /As	
n = 1.36E+21 cm ⁻³	
my = 3.84E+01 cm ² /Vs	



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RNW Instruments Shanghai Office RNW TECHNOLOGY(H.K)Co.,LTD 04/25/14 03:41 下午



RH2035图片