

Materials List for:

Quantification of Hydrogen Concentrations in Surface and Interface Layers and Bulk Materials through Depth Profiling with Nuclear Reaction Analysis

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URL: <https://www.jove.com/video/53452>

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Materials

Name	Company	Catalog Number	Comments
Material			
Pd single crystal	SPL (Surface Preparation Laboratory), http://www.spl.eu/products.html , or any other suitable supplier	Order made to specification	Disk, 9 mm diam., (110) oriented, aligned to < 0.5 degree or less, one side polished to < 0.3 mm roughness, self-prepared specimen
H ₂ gas	Joutou Gas Corporation, Ltd., Japan, http://www.jyotougas.co.jp/item/gas.html		(99.9995%), or any other suitable supplier
O ₂ gas	Joutou Gas Corporation, Ltd., Japan, http://www.jyotougas.co.jp/item/gas.html		(99.99%), or any other suitable supplier
Ar gas	Joutou Gas Corporation, Ltd., Japan, http://www.jyotougas.co.jp/item/gas.html		(99.99995%), or any other suitable supplier
Tantalum / Wire	The Nilaco Corporation, http://nilaco.jp/en/order.php	TA-411325	(99.95%), 0.3 mm diam., or any other suitable supplier
Alumel / Wire	The Nilaco Corporation, http://nilaco.jp/en/order.php	851266	0.2 mm diam., or any other suitable supplier
Chromel / Wire (Chromel)	The Nilaco Corporation, http://nilaco.jp/en/order.php	861266	0.2 mm diam., or any other suitable supplier
Equipment			
3 keV Raster Ion Bombardment Gun and Control	VARIAN, http://www.eurovac.se/docs/varian1.htm	981-2046 Power Supply, 981-2043 Ion Gun	or equivalent product of any other suitable manufacturer
LEED-AUGER Optics	OCI, http://www.ocivm.com/spectrometer_bdl800ir.html	BDL600IR	or equivalent product of any other suitable manufacturer
Quadrupole Mass Spectrometer	Pfeiffer Vacuum, http://www.pfeiffer-vacuum.com/	Prisma QMS 200	or equivalent product of any other suitable manufacturer
Palladium Hydrogen Purifier	Power + Energy Inc., http://www.powerandenergy.com	PE-3001	99.9999999% purity; P+E H2 purifiers are now business of SAES Pure Gases Inc., http://www.saespuregas.com/Products/Gas-Purifier/Hydrogen/Palladium-Membrane/Palladium-Purifier-PE2100.html