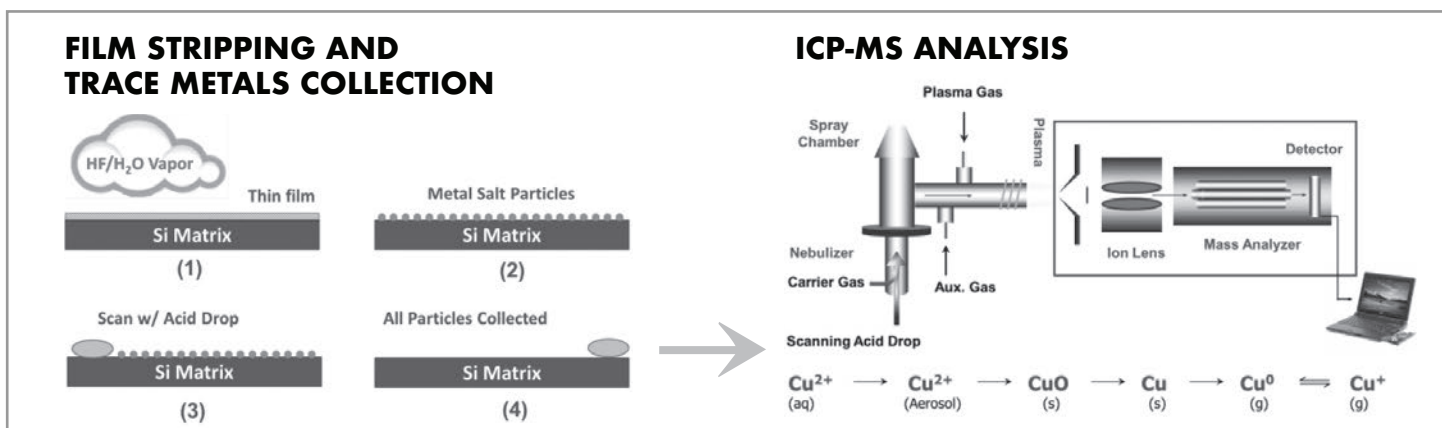


METALS AND METAL OXIDE DEPOSITION ANALYSIS

BY DIRECT FILM STRIPPING INDUCTIVELY COUPLED PLASMA
–MASS SPECTROMETRY FOR IN-FILM TRACE METAL IMPURITIES



ADVANTAGES

- Advanced wet chemistry technique allowing etching of full thickness of deposition across a larger surface area
- Fully quantitative
- High sensitivities
- 40 plus elements survey from Li to U
- Major metal composition

METHOD DETECTION LIMITS, E10 ATOMS/CM²

Elements	Al, Ni, Co, Cu, Mg, Based Films	Hf/ HfO _x / HfSi-Ox	La/ LaO _x	Ti/ TiO _x / TiN	W/ WO _x	Zr/ ZrO _x
Aluminum	Al	1	1	1	10	1
Calcium	Ca	1	1	1	10	1
Chromium	Cr	0.3	0.3	0.3	3	0.3
Cobalt	Co	0.3	0.3	0.3	3	0.3
Copper	Cu	0.2	0.2	0.2	3	2
Iron	Fe	0.5	0.5	0.5	5	0.5
Lead	Pb	0.02	0.02	0.02	0.02	0.02
Magnesium	Mg	0.5	0.5	0.5	3	5
Manganese	Mn	0.1	0.1	0.1	0.1	1
Molybdenum	Mo	0.05	0.05	0.05	0.01	0.5
Nickle	Ni	0.3	0.3	0.3	0.3	3
Potassium	K	1	1	1	1	10
Sodium	Na	1	1	1	1	10

*Expansive list up to 40E available upon request.