Stress Controlled TiW Deposition:

- 4" diameter TiW target
- Characterization as a function of pressure and substrate bias
- Target at 300W DC, Gas injected adjacent to target
- Substrate bias is 13MHz, 20W, capacitively coupled to wafer
- Stress measurements performed on the Toho system at 0°,45°,90°, 135° with respect to the major wafer flat
- Each wafer thickness measured and compensated for in the Toho software

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Tabulated Results

Pressure (mTorr)	Thickness (nm)	Rate (nm/min)	Target Bias Params at 300W	Substrate Bias Params at 20W	Stress (MPa)
2	245	8.17	Not recorded	0	-372
3	209	9.08	Not recorded	0	+711
5	228	9.70	Not recorded	0	+1555
2	136	4.53*	Not recorded	Refl: 18W, 107V	-1370
3	164	8.18	330V, 0.904A	Refl: 0W, 277V	-2758
5	166	8.3	300V, 0.986A	Refl: 0W, 275V,	-2283

* Deposition time may be wrong …

Graphical Results