PART ONE: General description

Process name	*Process Code*	05/16/00 *Last Update*
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Author	*Contact Information (Email)*	

Deep KOH etching

General description of process

PART TWO: Details

☒ *Cleaning*

☒ Nano-strip 10 *Time (min)*

☒ BOE 1 *Time (min)*

☒ *Wet Oxidation*

450 *Thickness (nm)*

☒ *Metal deposition*

Sputter sphere *Evaporator*

☒ Cr *Material* 60 *Thickness (nm)*

☐ TiW *Material* *Thickness (nm)*

Background Pressure: <1e-6 *(mTorr)*

☒ *Resist Coating*

☐ P-10 *Primer*		*Speed1 (RPM)*	*Time(sec)*	*Speed2 (RPM)*	*Time(sec)*
☐ HMDS					
☒ AZ 1512 *Resist*	500 *Speed1 (RPM)*	5 *Time(sec)*	3000 *Speed2 (RPM)*	30 *Time(sec)*	

☒ PreBake	Hot Plate	100	3
		T (℃)	*Time(min)*
☒ Exposure	3" Aligner		20
			Time(sec)
☒ Develope	AZ351:H2O (1:4)		60
	Developer		*Time(sec)*
☐ PostBake	Oven		
		T (℃)	*Time(min)*

☒ *Etching*

BOE			10
etchant	*P (PSI)*	*T (℃)*	*Time(min)*

comments

☒ *Etching*

KOH 30%		0	250
etchant	*P (PSI)*	*T (℃)*	*Time(min)*

comments

☐ *Rinse and Dry*

PART THREE: General Comments

To ensure good adhesion between the oxide and the metal must not use lift-off.
The developer etches the Cr so after sufficiently long developing there is no Cr left.
For the same procedure can also use TiW. In this case must etch TiW with H2O2 after lithography.
Make sure not to expose metals to Nanostrip. The nanostrip etches the metals.
To have even better protection for the oxide can sputter thick layer of Au.
The Au can be etched with Au etchant.