

Bilayers of titane nitride (TiN) with hafnium nitride (HfN)												
Image (gf)	Vertice	Row (μm)	Column (μm)	l_1 (μm)	l_2 (μm)	Average diagonal length (μm)	HV (GP)	l_1 (μm)	l_2 (μm)	Average diagonal length (μm)	HV (GP)	Relative error in average diagonal length
1 of 1	Data obtained by algorithm for automatic detection and measurement of indentation in Vickers hardness testing images						Data obtained in the manual manner by an expert					
1 (10)	A	96.375	54.125	8.76427	9.8298	9.297	2.14498405	8.834308	9.899836	9.367	2.113012	0.7481
	B	99.125	37.125									
	D	102.375	33.625									
	C	95.625	34.625									
2(10)	A	100.625	28.625	9.50329	10.0778	9.791	1.93399625	9.51617	10.0907	9.803	1.929092	0.1269
	B	100.125	37.375									
	D	103.625	34.375									
	C	94.375	32.625									
3(10)	A	110.625	39.875	7.26722	8.13941	7.703	3.12456766	7.270001	8.14219	7.706	3.122058	0.0402
	B	99.375	36.375									
	D	102.125	32.375									
	C	95.875	33.875									
4(10)	A	53.125	29.375	9.80115	10	9.901	1.89126162	9.860131	10.05898	9.960	1.869088	0.5879
	B	99.625	36.875									
	D	102.125	32.875									
	C	95.375	32.875									
5(10)	A	89.625	41.625	8.01561	9.80115	8.908	2.33641138	8.030728	9.816267	8.923	2.328303	0.1737
	B	106.875	65.375									
	D	115.625	57.375									
	C	98.125	55.625									
6(10)	A	108.875	59.875	7.75	9.37083	8.56	2.53024282	7.868847	9.48968	8.679	2.461183	1.3741
	B	81.375	61.875									
	D	83.875	58.875									
	C	78.625	59.875									
7 (50)	A	114.375	36.875	17.2663	19.2905	18.278	2.7747406	17.28806	19.3123	18.300	2.768018	0.1212
	B	75.625	50.125									
	D	81.625	44.125									
	C	70.625	45.625									
8 (50)	A	115.125	37.875	14.7521	16.298	15.525	3.84606409	14.75971	16.3056	15.533	3.842274	0.0493
	B	73.625	43.875									
	D	78.375	36.625									
	C	67.875	38.625									
9 (50)	A	72.125	58.125	15.7995	19.0016	17.401	3.06147925	15.86814	19.07025	17.469	3.037623	0.3904
	B	97.375	55.125									
	D	107.125	47.125									
	C	90.375	48.875									
10(10)	A	89.875	26.625	6.505	6.619	6.562	4.3066	6.518	6.632	6.575	4.2898	0.1952
	B	90.125	33.125			0						
	C	92.875	29.375			0						
	D	86.375	30.625			0						
Total relative error =											0.3807	3.8069