

STable 2. The chemical composition of surface phases was analyzed after selenization of thin metal films of Au, Fe, and Cu that were sequentially deposited on Qtz crystals., (wt.%).

Region number scanning		Si	O	Fe	Cu	Au	Se
1 Fig. 5b	1	6.5	12.2	22.1	27.7	0.0	31.5
	2	0.0	0.0	44.6	42.7	2.0	10.7
	3	38.7	50.6	0.0	5.4	3.2	2.0
	4	34.8	53.3	0.4	5.3	3.7	2.4
2 Fig. 5d	1	10.7	25.3	0.0	1.7	0.0	62.3
	2	0.0	0.0	0.0	3.3	0.0	96.7
	3	38.7	61.3	0.0	0.0	0.0	0.0
	4	33.8	61.4	0.0	0.2	4.6	0.0
	5	41.0	54.8	0.0	0.3	3.6	0.3
	6	34.5	60.2	0.0	0.5	4.6	0.3
3	1	3.2	12.9	0.0	1.6	77.3	5.0
	2	0.0	0.0	0.0	1.9	89.1	9.1
	3	51.4	40.8	0.0	0.7	6.3	0.8
	4	48.0	41.4	0.0	0.4	10.1	0.0
	5	24.3	62.2	0.0	1.6	11.0	0.9
	6	32.3	61.4	0.0	0.2	5.9	0.2
	7	26.2	56.5	0.0	0.4	16.5	0.4
4	1	18.2	35.4	0.0	1.3	0.0	45.2
	2	41.2	55.1	0.0	0.2	0.0	3.6
	3	33.7	51.3	0.0	0.7	0.0	14.3
	4	36.4	63.6	0.0	0.0	0.0	0.0
	5	0.0	0.0	0.0	4.2	0.0	95.8
	6	44.9	53.2	0.0	0.2	1.3	0.4
5 Fig. 5a	1	4.1	9.8	0.0	1.1	84.6	0.5
	2	0.0	0.0	0.0	1.4	98.6	0.0
	3	42.8	56.9	0.0	0.2	0.0	0.0
	4	4.7	14.7	0.0	1.2	78.6	0.8
	5	0.0	0.0	0.0	1.1	98.9	0.0
	6	39.4	60.4	0.0	0.2	0.0	0.0
6 Fig. 5c	1	9.9	15.6	0.0	4.9	0.0	69.6
	2	0.0	0.0	0.0	5.5	0.0	94.5
	3	49.1	45.9	0.0	0.6	3.8	0.7
	4	41.2	41.1	0.0	1.3	15.9	0.6