Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supplementary information

Characterization of Si-IONPs

The synthesized Si-IONPs were characterized by transmission electron microscope (TEM) and scanning electron microscope (SEM) which was shown in the **Fig. S1**

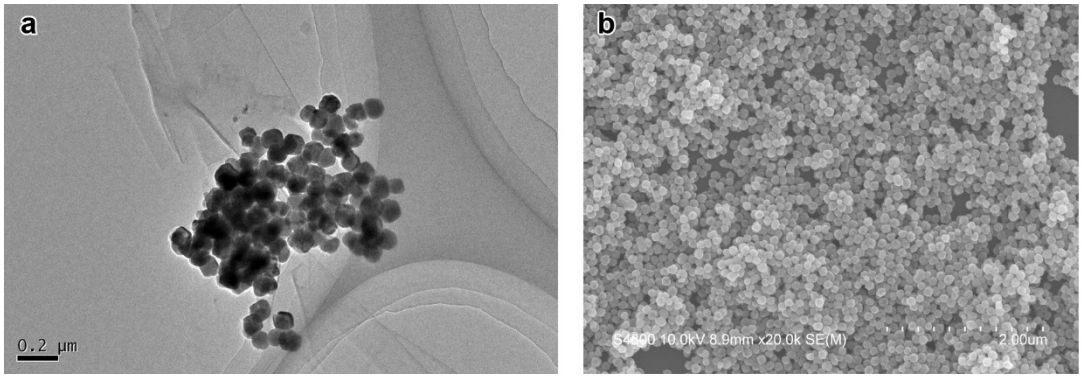

Fig. S1 Characterization of Si-IONPs. a: TEM, b: SEM.

Cell proliferation

To have a more intuitive understanding of the Si-IONPs' effect on cell proliferation directly, we observed the cell growth within 48 h through an automated live-cell time-lapsed imaging system. The live-cell time-lapsed images in the control and Si-IONPs-treated groups were supplied in the Fig. S2, S3.

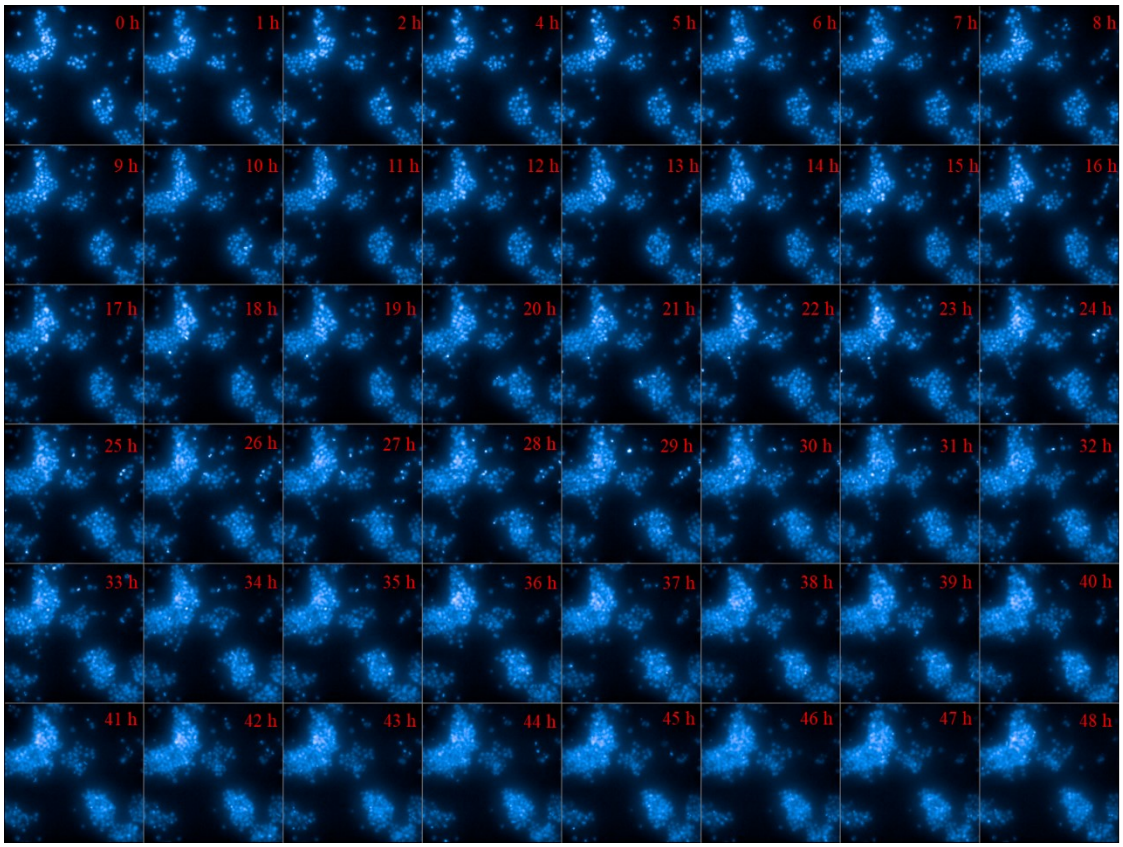

Fig. S2 Cell growth images in the control group within 48 h.

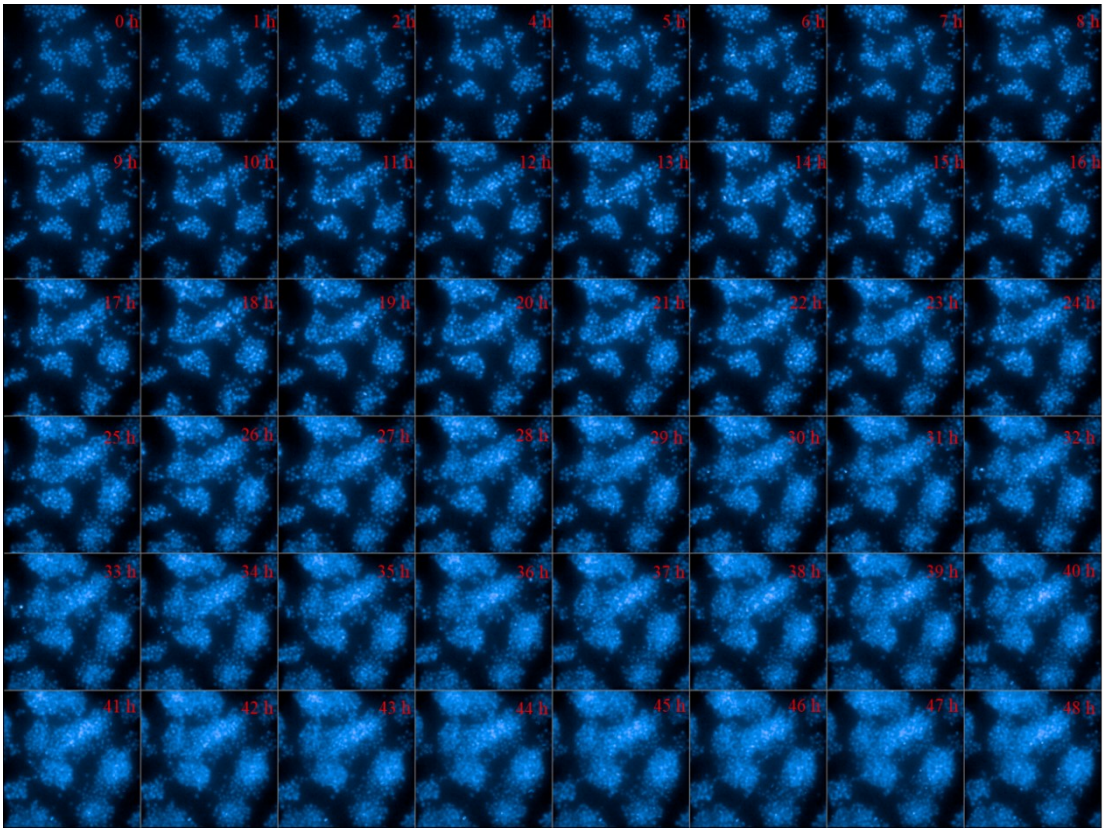

Fig. S3 Cell growth images in the Si-IONPs group within 48 h. Si-IONPs: silica coated IONPs

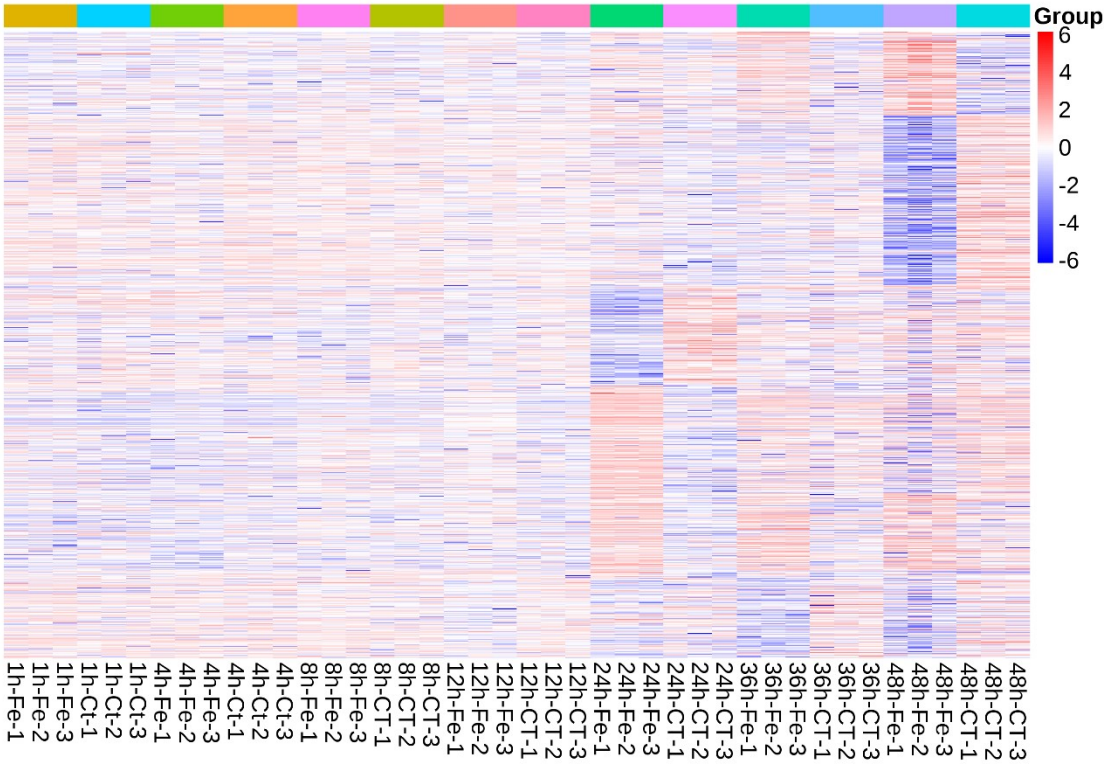

Fig. S4 The heatmap for 3 replicates per group of the 1111 DEPs.

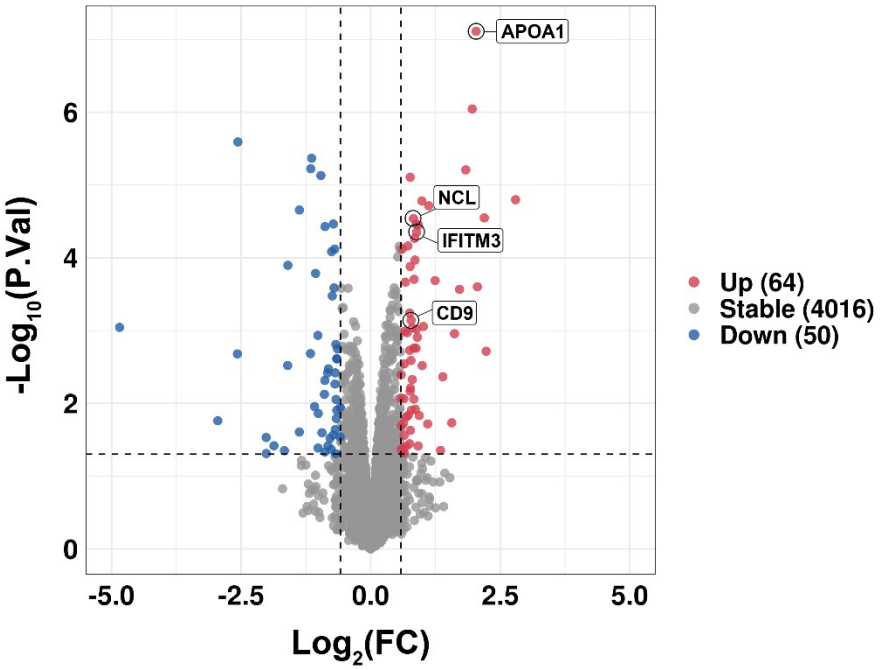

Fig. S5 The volcano plot of DEPs at 1 h.

Table S1 The expression of the selected DEPs at different time points in RAW 264.7 cells.

	1 h	4 h	8 h	12 h	24 h	36 h	48 h
CD74	−0.13164	0.257816	0.170869	0.188894	−0.01484	0.806307	1.436412
NPM1	0.453771	0.66173	0.290804	0.673023	1.151295	1.809671	0.521599
CLEC4E	−0.15242	0.991842	1.084402	1.148686	1.06283	0.816299	1.674331
CTSD	−0.05358	0.02886	0.015297	0.278409	0.379491	0.616403	0.677287
IRGM1	0.12622	0.144894	0.062991	0.381199	1.010093	1.129765	0.757338
SFPQ	−0.00991	0.212157	0.470121	0.200228	0.875688	1.09101	0.634697
IFIH1	0.134812	0.125344	0.470499	1.013643	1.714714	2.780239	3.276013
OAS1A	0.232235	−0.13992	0.128067	0.500665	1.16133	0.810603	1.566865
LGALS9	0.423508	0.198284	0.159516	0.528139	0.986277	1.63154	2.281306
IFI204	0.014441	0.063501	0.439644	0.987122	1.883674	1.337006	1.208063
PRDX5	−0.07569	0.055718	0.197312	0.088034	0.269419	0.349517	0.895561
PARK7	0.156591	−0.11759	−0.07574	−0.19023	−0.49056	−0.33747	−0.65125
STAT3	0.336123	-0.282852	-0.107212	0.154116	0.732177	0.395529	0.782558
TNIP1	-0.724656	0.105463	0.360886	-0.014466	0.531336	0.902728	2.203690