

Supplementary Materials:

Table S1. Result of effective band screening based on CARS method

Method	Number of Bands	Wavelength (nm)
CARS	67	465, 467, 475, 480, 482, 488, 505, 515, 517, 535, 536, 537, 596, 679, 714, 716, 718, 730, 737, 746, 747, 750, 753, 757, 778, 782, 782, 793, 818, 824, 828, 839, 841, 842, 854, 858, 860, 865, 866, 868, 879, 883, 886, 893, 903, 910, 912, 913, 933, 942, 944, 945, 956, 957, 959, 962, 963, 966, 972, 979, 981, 982, 986, 989, 991, 1002, 1004

Table S2. Parameter setting of three regression models (PLS, ANN and SVM) based on different band combinations

Bands	Models	Setting of parameters
All bands	PLS	nLVs = 5
	ANN	topo = ['HHH', 'L--'], epochs = 5
	SVM	linear kernel function, p = 0.16, c = 194, g = 0.00097656
CARS	PLS	nLVs = 10
	ANN	topo = ['HHH', 'L--'], epochs = 5
	SVM	linear kernel function, p = 0.11, c = 1024, g = 0.00296038