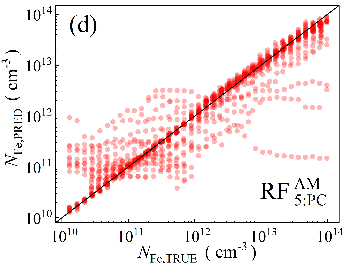
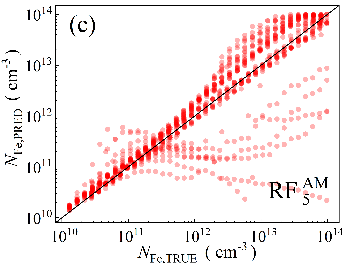
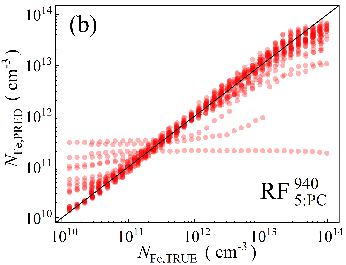
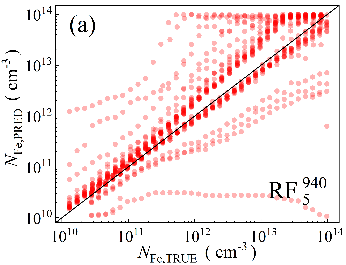
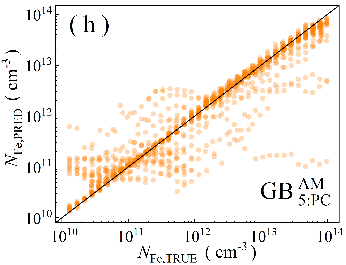
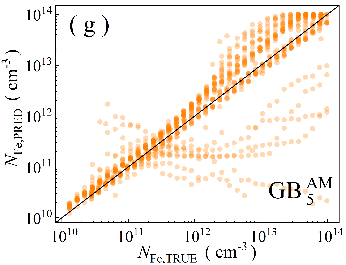
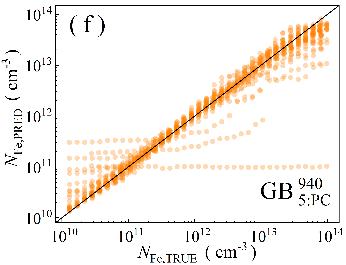
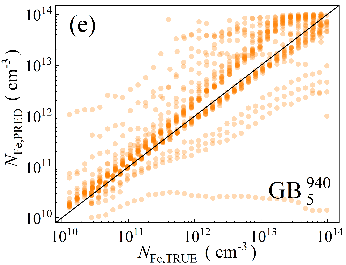
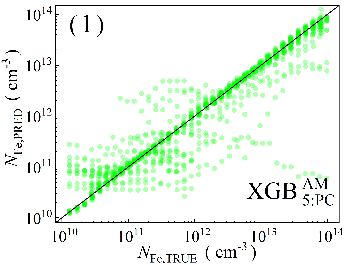
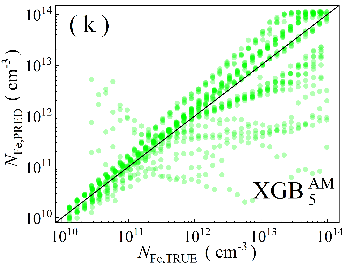
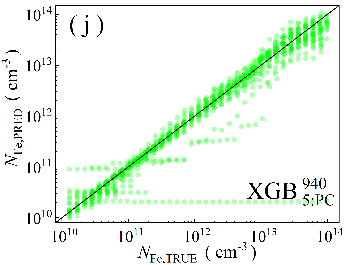
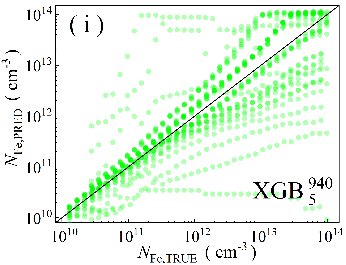
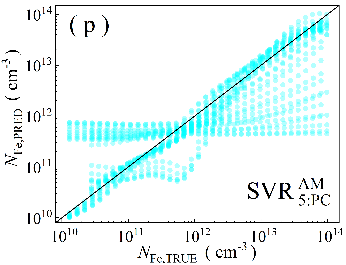
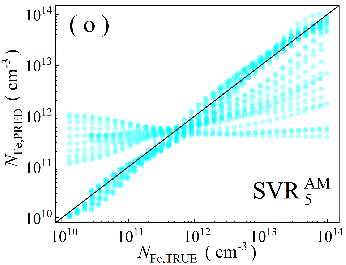
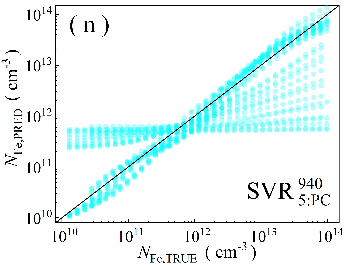
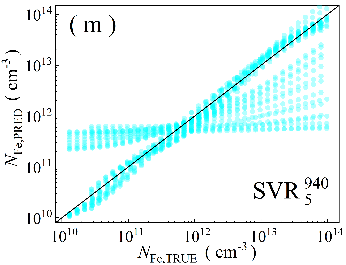


Fig.S20. Scatter plots of the iron concentrations between the reference values and ML predicted values for test phase All-altered in the case of 4D features. ML algorithms: RF (a-d), GB (e-h), XGB (i-l), SVR (m-p), DNN (q-t). The data are obtained for monochromatic (a, b, e, f, i, j, m, n, q, r) and AM1.5 (c, d, g, h, k, l, o, p, s, t illuminations. PCA was used for the panels b, d, f, h, j, l, n, p, r, and t. The black lines are the identify lines servings as the references.









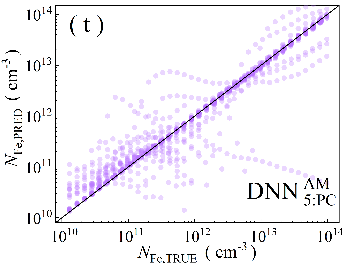
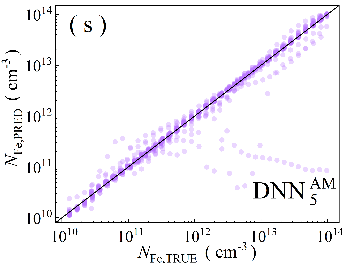
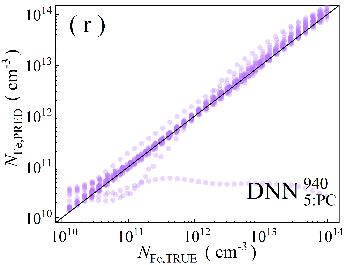
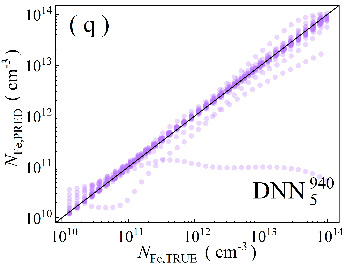
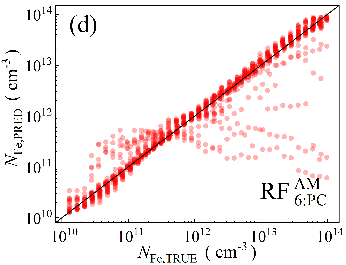
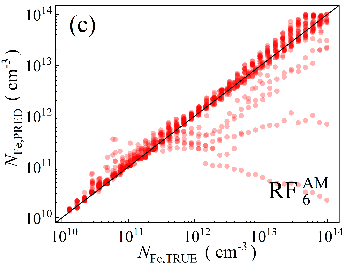
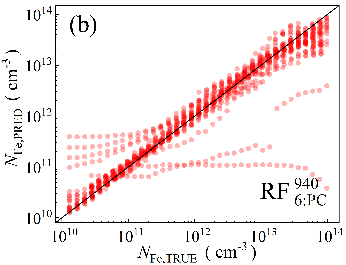
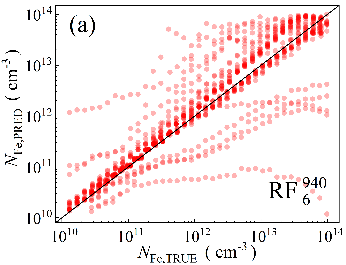
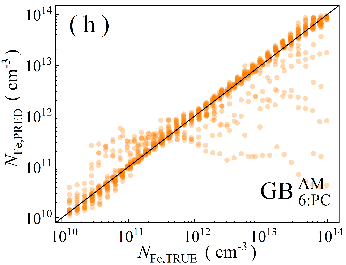
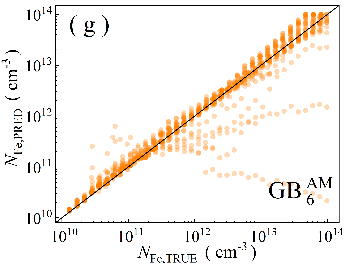
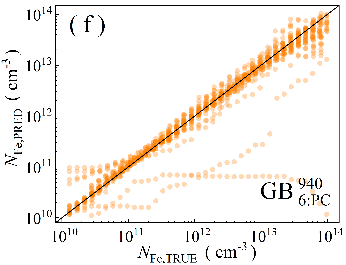
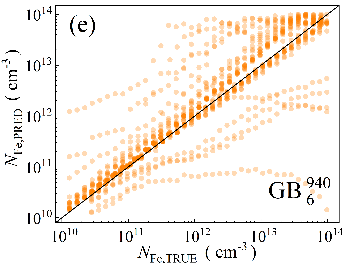
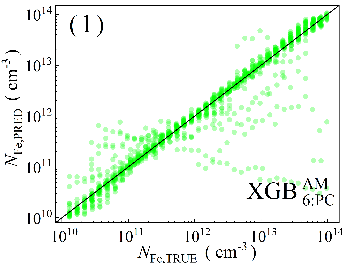
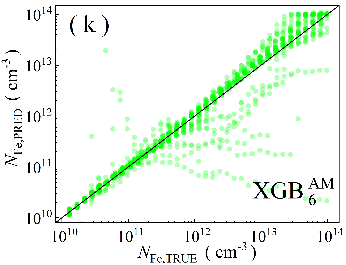
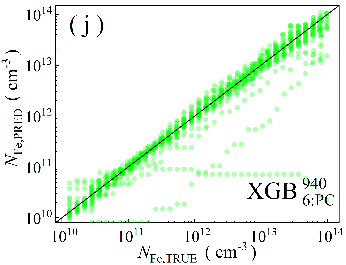
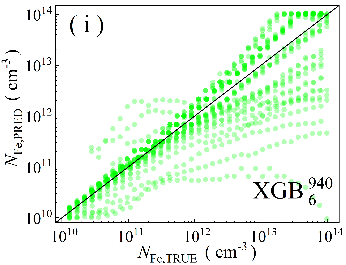
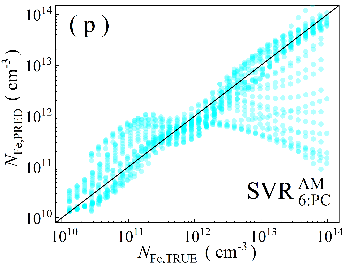
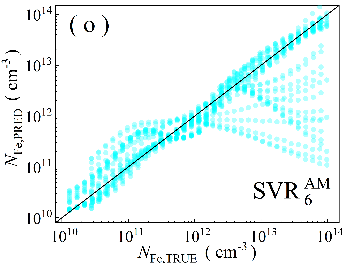
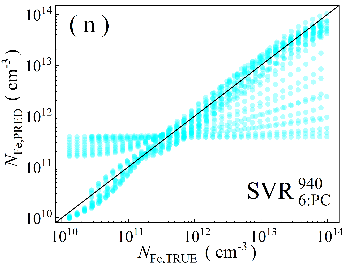
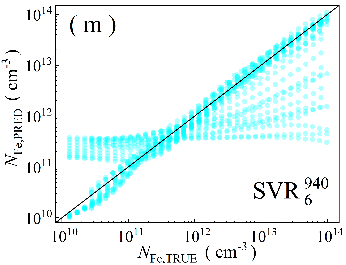


Fig.S21. Scatter plots of the iron concentrations between the reference values and ML predicted values for test phase All-altered in the case of 5D features. ML algorithms: RF (a-d), GB (e-h), XGB (i-l), SVR (m-p), DNN (q-t). The data are obtained for monochromatic (a, b, e, f, i, j, m, n, q, r) and AM1.5 (c, d, g, h, k, l, o, p, s, t illuminations. PCA was used for the panels b, d, f, h, j, l, n, p, r, and t. The black lines are the identify lines servings as the references.









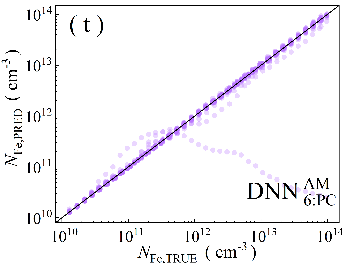
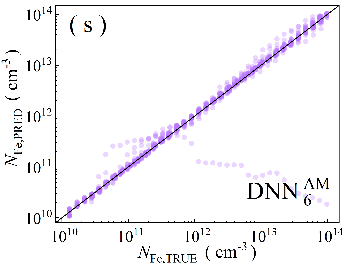
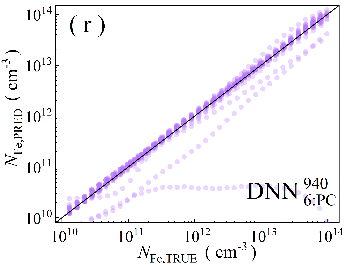
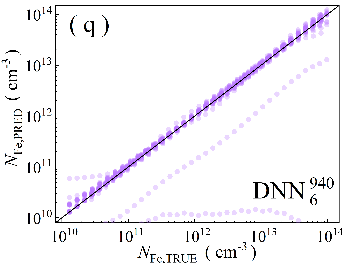
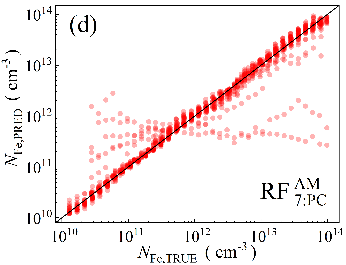
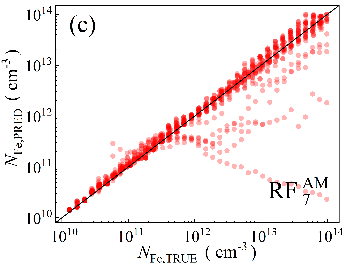
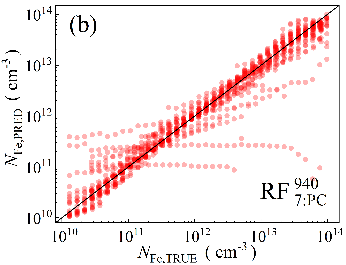
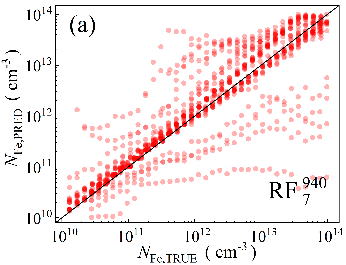
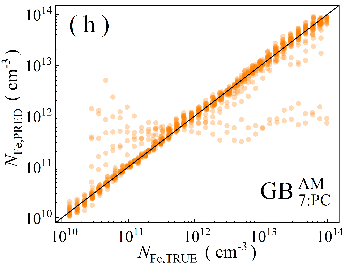
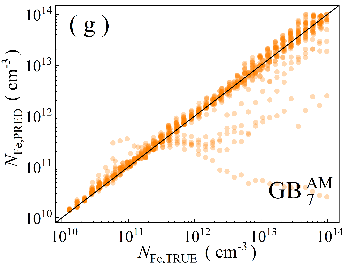
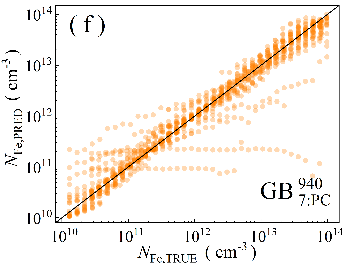
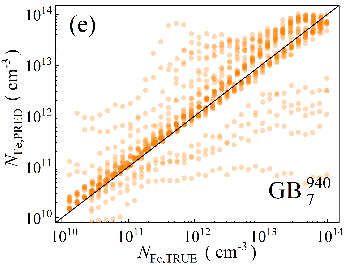
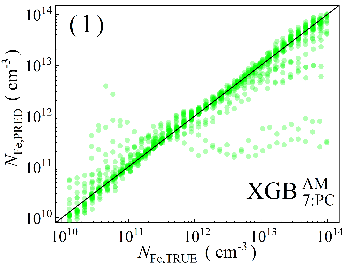
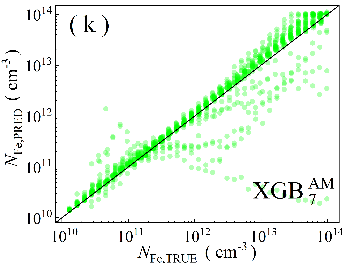
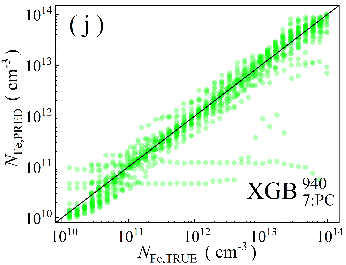
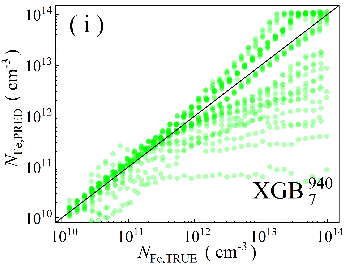
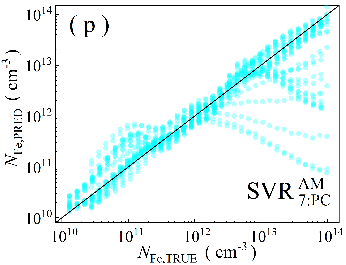
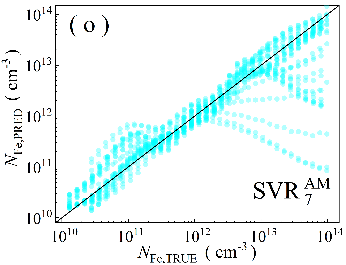
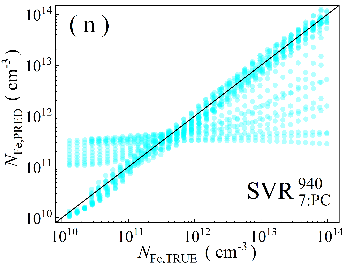
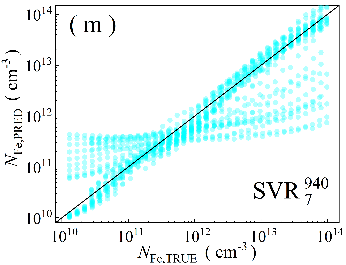


Fig.S22. Scatter plots of the iron concentrations between the reference values and ML predicted values for test phase All-altered in the case of 6D features. ML algorithms: RF (a-d), GB (e-h), XGB (i-l), SVR (m-p), DNN (q-t). The data are obtained for monochromatic (a, b, e, f, i, j, m, n, q, r) and AM1.5 (c, d, g, h, k, l, o, p, s, t illuminations. PCA was used for the panels b, d, f, h, j, l, n, p, r, and t. The black lines are the identify lines servings as the references.









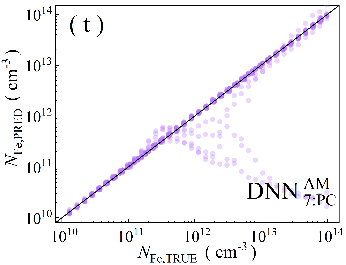
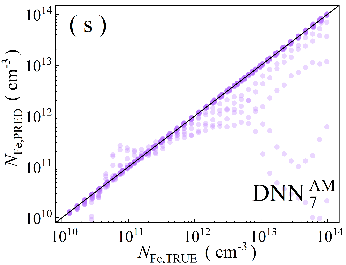
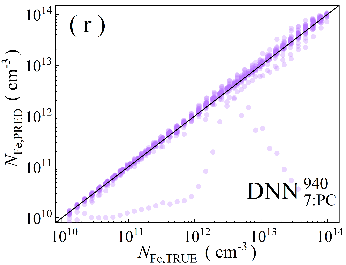
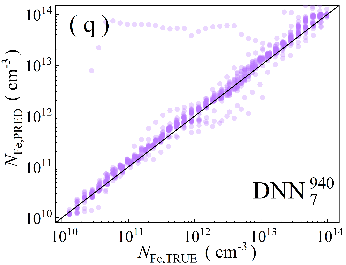


Fig.S23. Scatter plots of the iron concentrations between the reference values and ML predicted values for test phase All-altered in the case of 7D features. ML algorithms: RF (a-d), GB (e-h), XGB (i-l), SVR (m-p), DNN (q-t). The data are obtained for monochromatic (a, b, e, f, i, j, m, n, q, r) and AM1.5 (c, d, g, h, k, l, o, p, s, t illuminations. PCA was used for the panels b, d, f, h, j, l, n, p, r, and t. The black lines are the identify lines servings as the references.