

Electronic Supplementary Information

Table of contents

1. Chemical reagents and IR spectrum of ZIF-8, 5FZ, 7FZ and DOX@7FZ.....	S2
2. Size and potential values of ZIF-8, 5FZ, 7FZ and 15FZ.....	S3
3. XPS spectrum 5FZ and 7FZ.....	S3
4. Color of various yields.....	S4
5. Western blot analysis and the matching quantitative data.....	S5
6. FT-IR spectra of ZIF-8, 5FZ, 7FZ and DOX@7FZ.....	S5

Table S1. Table of chemical reagents.

Name of reagent	Purity of reagent	Manufacture
Methanol	A. R.	Aladdin (Shanghai, China)
2-methylimidazole	A. R.	Aladdin (Shanghai, China)
Zinc nitrate hexahydrate	A. R.	Aladdin (Shanghai, China)
Iron sulfate heptahydrate	A. R.	Aladdin (Shanghai, China)
Doxorubicin hydrochloride	Medical grade	Aladdin (Shanghai, China)
PBS	A. R.	Solarbio (Beijing, China)
NaOH	A. R.	Aladdin (Shanghai, China)

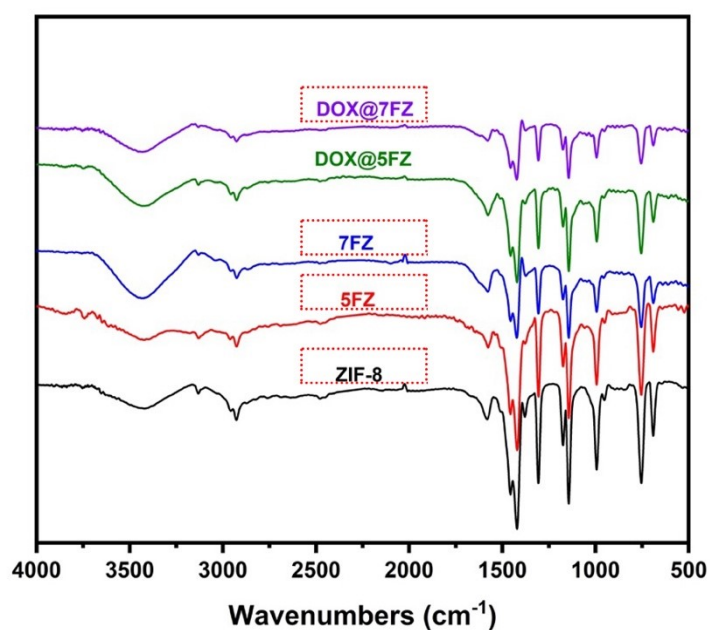


Figure S1. FT-IR spectra of ZIF-8, 5FZ, 7FZ and DOX@7FZ.

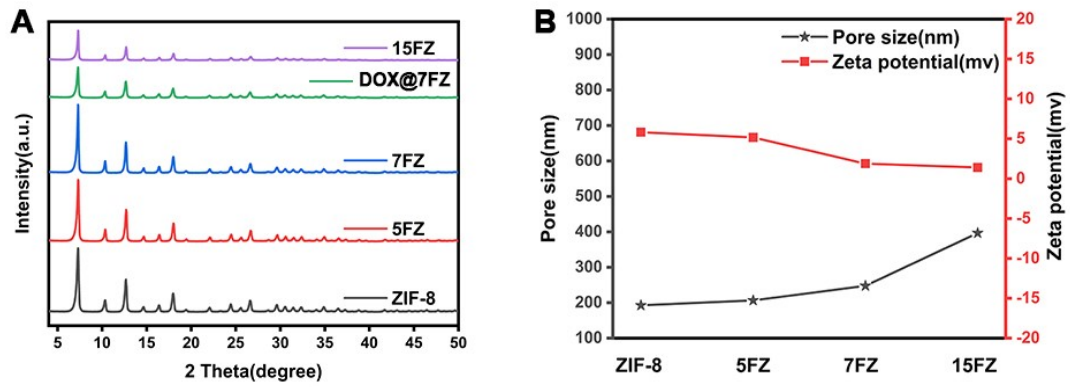


Figure S2. The hydrodynamic diameter and zeta potential values of ZIF-8, 5FZ, 7FZ, and 15FZ.

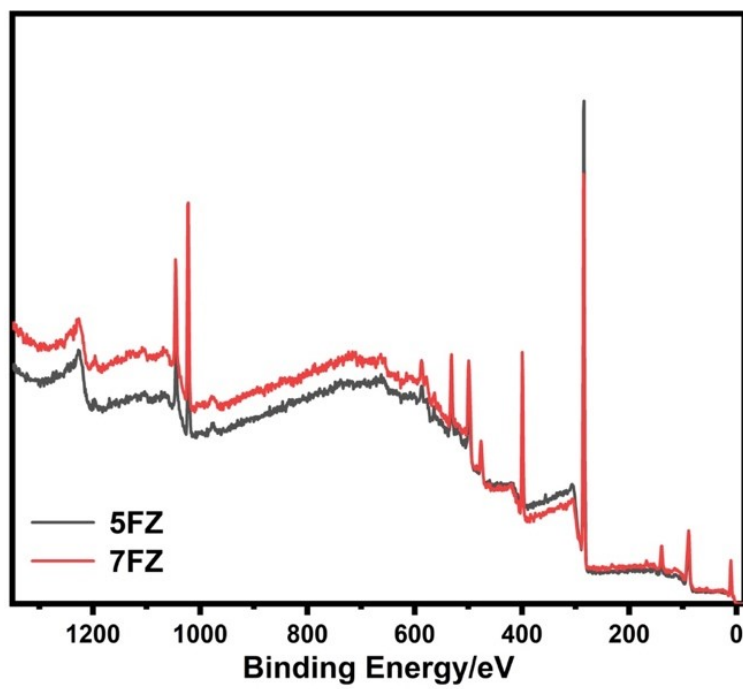


Fig. S3 XPS wide scan spectra of 5FZ and 7FZ.

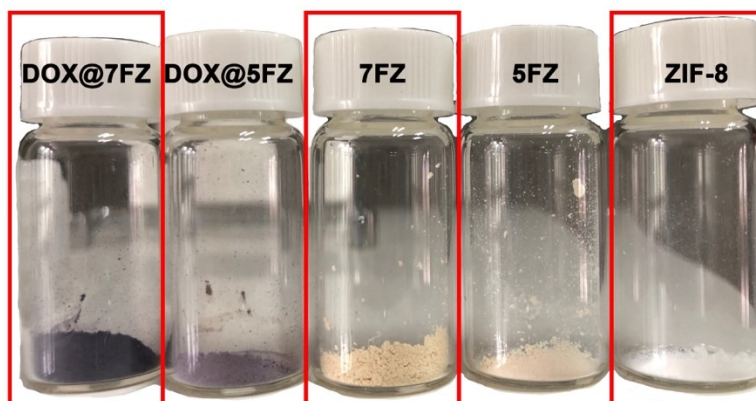


Figure S4 Color of various yields.

Table S1 The Fe valances of the as-prepared $x\%$ Fe-ZIF-8 powders

$x\%$ Fe-ZIF-8	Peaks	Fe/valance
5FZ	712.12 eV	Fe (III) 2p _{3/2}
	722.13 eV	Fe(II) 2p _{1/2}
	726.96 eV	Fe(III) 2p _{1/2}
7FZ	712.13 eV	Fe (III) 2p _{3/2}
	722.03 eV	Fe(II) 2p _{1/2}
	725.98 eV	Fe(III) 2p _{1/2}

Table S2 The BET data for the different samples

Samples	S _{BET} (m ² /g)
ZIF-8	2303
5FZ	1271
7FZ	1206

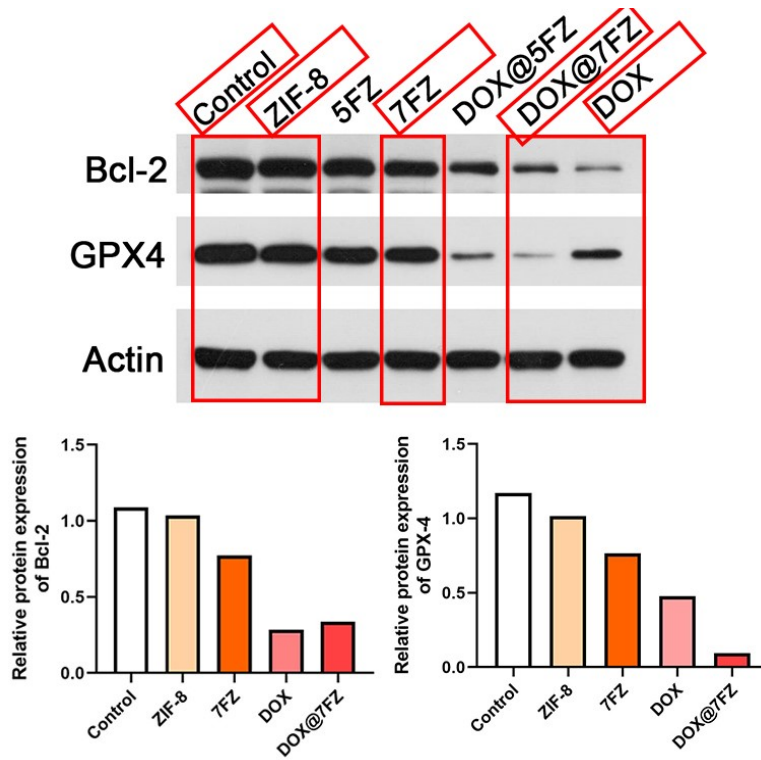


Figure S5. Western blot analysis and the matching quantitative data of Bcl-2 and GPX4 in MCF-7 cells with various treatments after 24h as indicated. β -actin (noted as Actin) was set as a control.

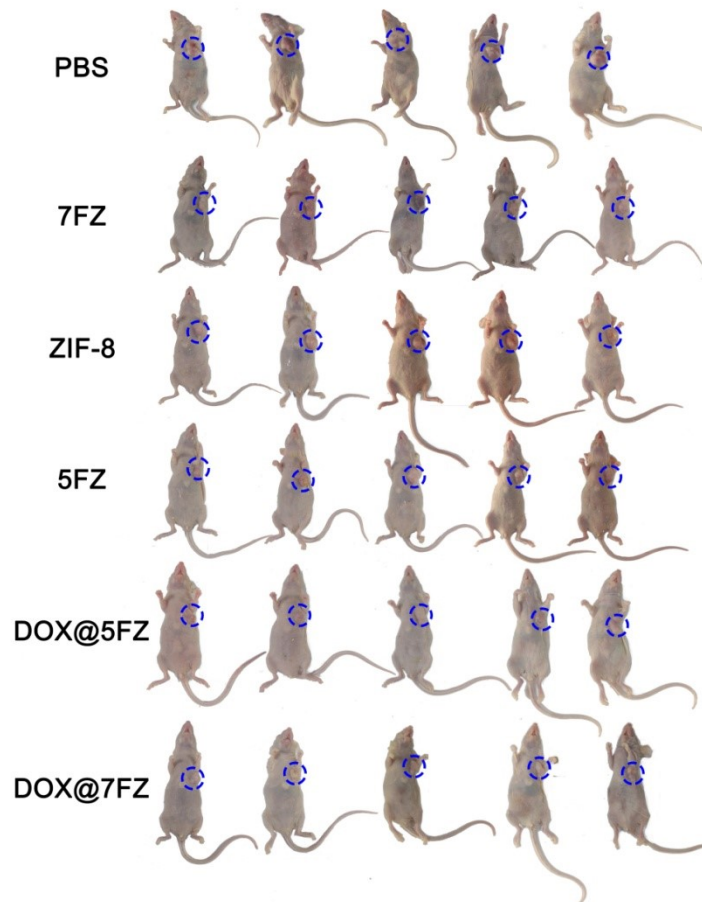


Fig. S6 the tumor volume of different groups and control group.

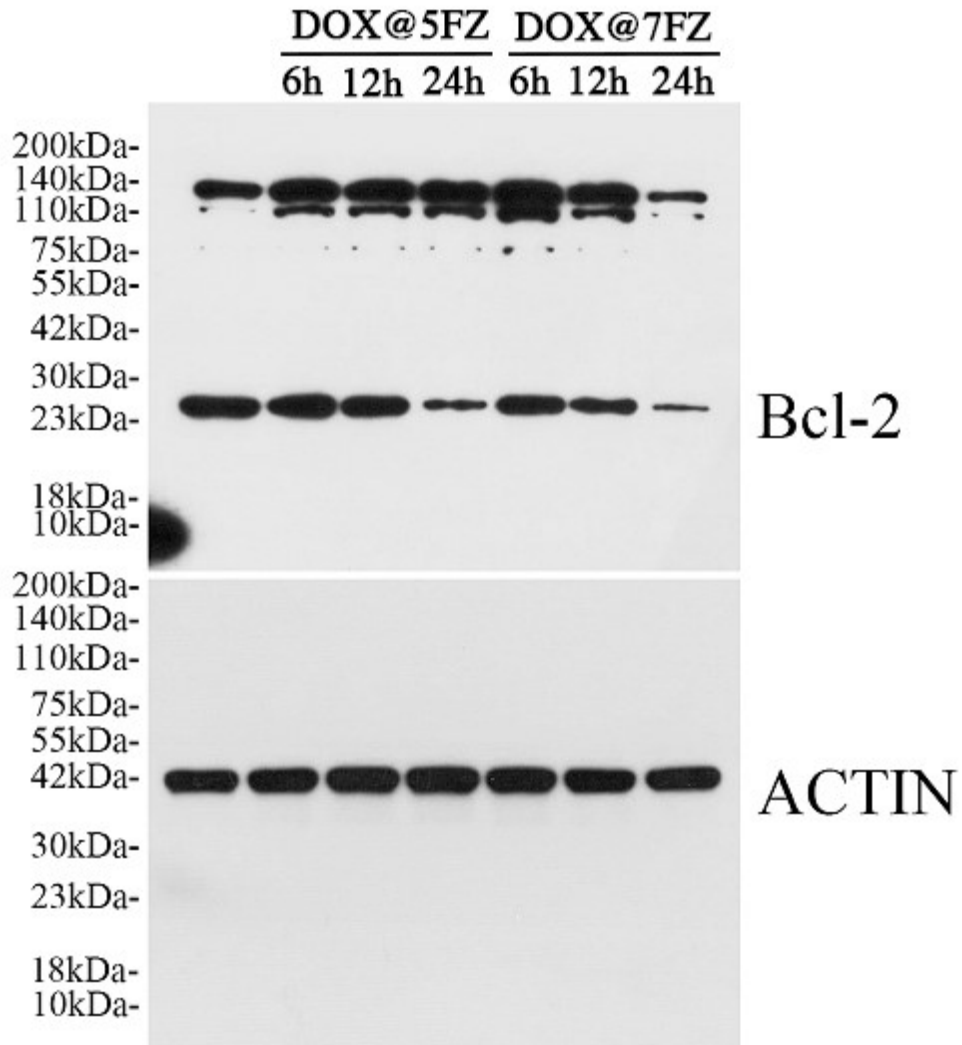


Fig. S7 Western blot analysis data of Bcl-2.

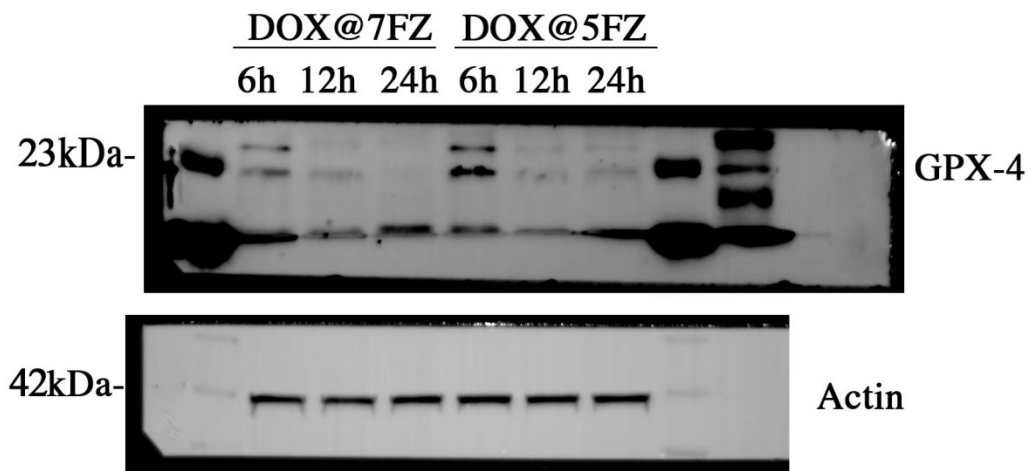


Fig. S8 Western blot analysis data of GPX-4.

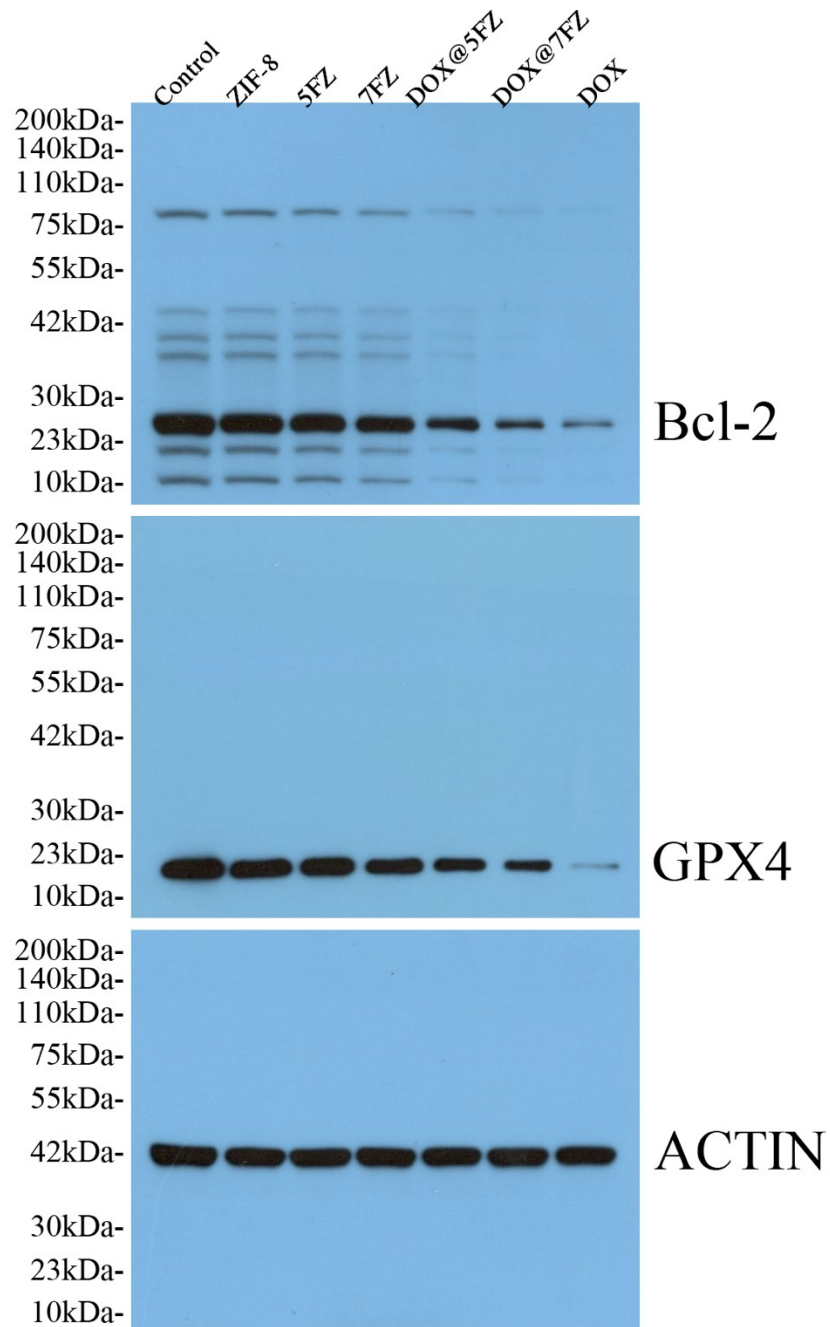


Fig. S9 Western blot analysis data of Bcl-2 and GPX4 in MCF-7 cells with various treatments after 24h as indicated. β -actin (noted as Actin) was set as a control.