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Supporting Information

A Smart All-in-One Theranostic Platform for CT Imaging Guided Tumor Microwave Thermotherapy based on IL@ZrO_2 Nanoparticles

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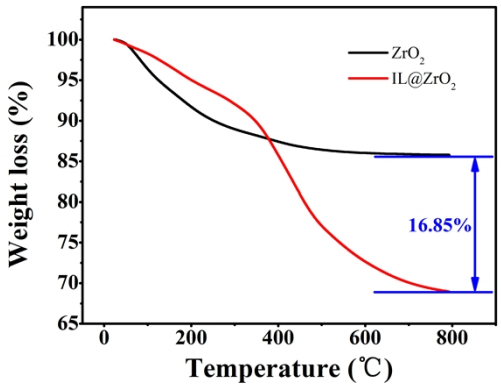

Fig. S1 TGA curves of ZrO_2 and IL@ZrO_2. The temperature increased from room temperature to 800 ℃, with the rate of 10 ℃ /min at nitrogen flow.

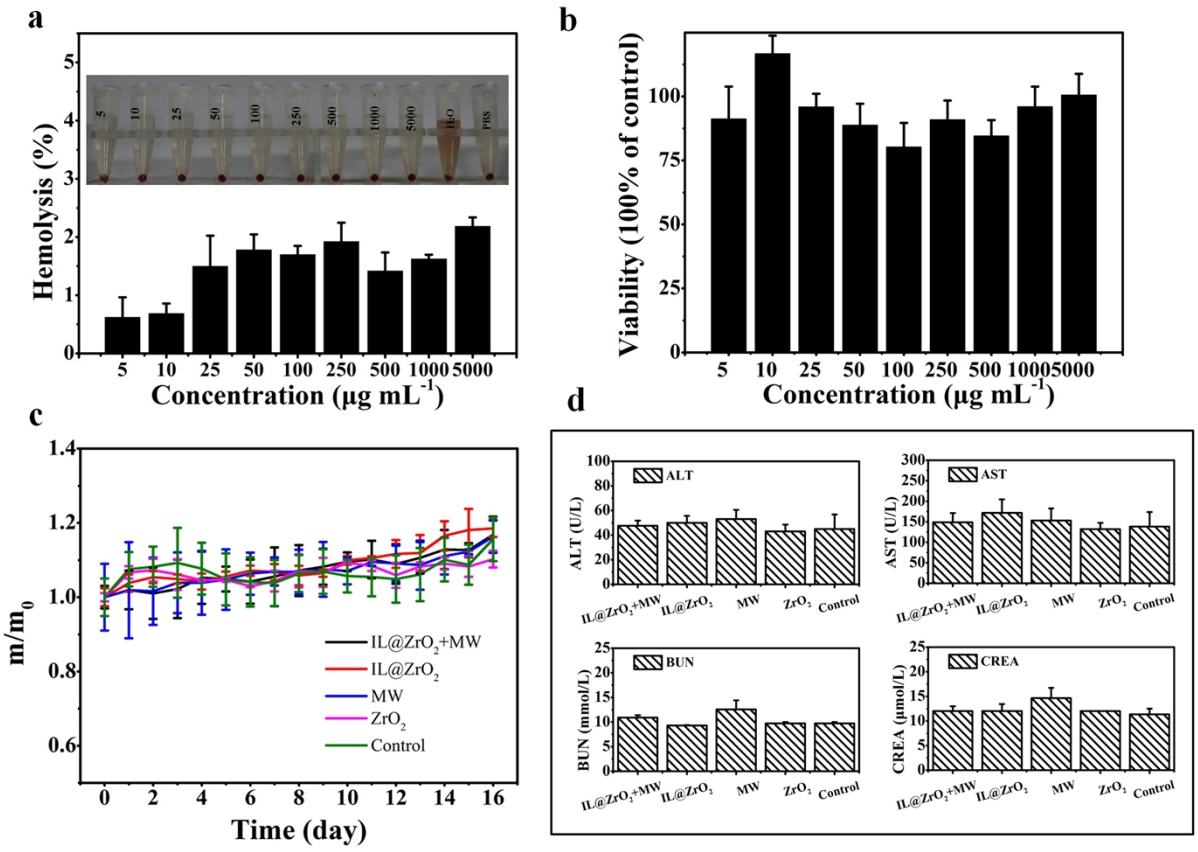

Fig. S2 Toxicity evaluation of the IL@ZrO_2 nanoparticles *in vitro* and *in vivo*. (a) Hemolysis ratio of IL@ZrO_2 with different concentrations, inset represents the hemolysis images the tubes represent 5, 10, 25, 50, 100, 250, 500, 1000, 5000 μg mL^{-1}, positive control group, and negative control group from left to right, respectively (n=3 in each treatment group). (b) Cell viability after incubating HepG2 cells for 24 h with IL@ZrO_2 of different concentrations, with showing low cytotoxicity (n=5 in each treatment group). (c) Effects of IL@ZrO_2, ZrO_2 and microwave on body weight of ICR mice. (d) Effects of IL@ZrO_2, ZrO_2 and microwave on clinical blood biochemistry indexes of ICR mice.

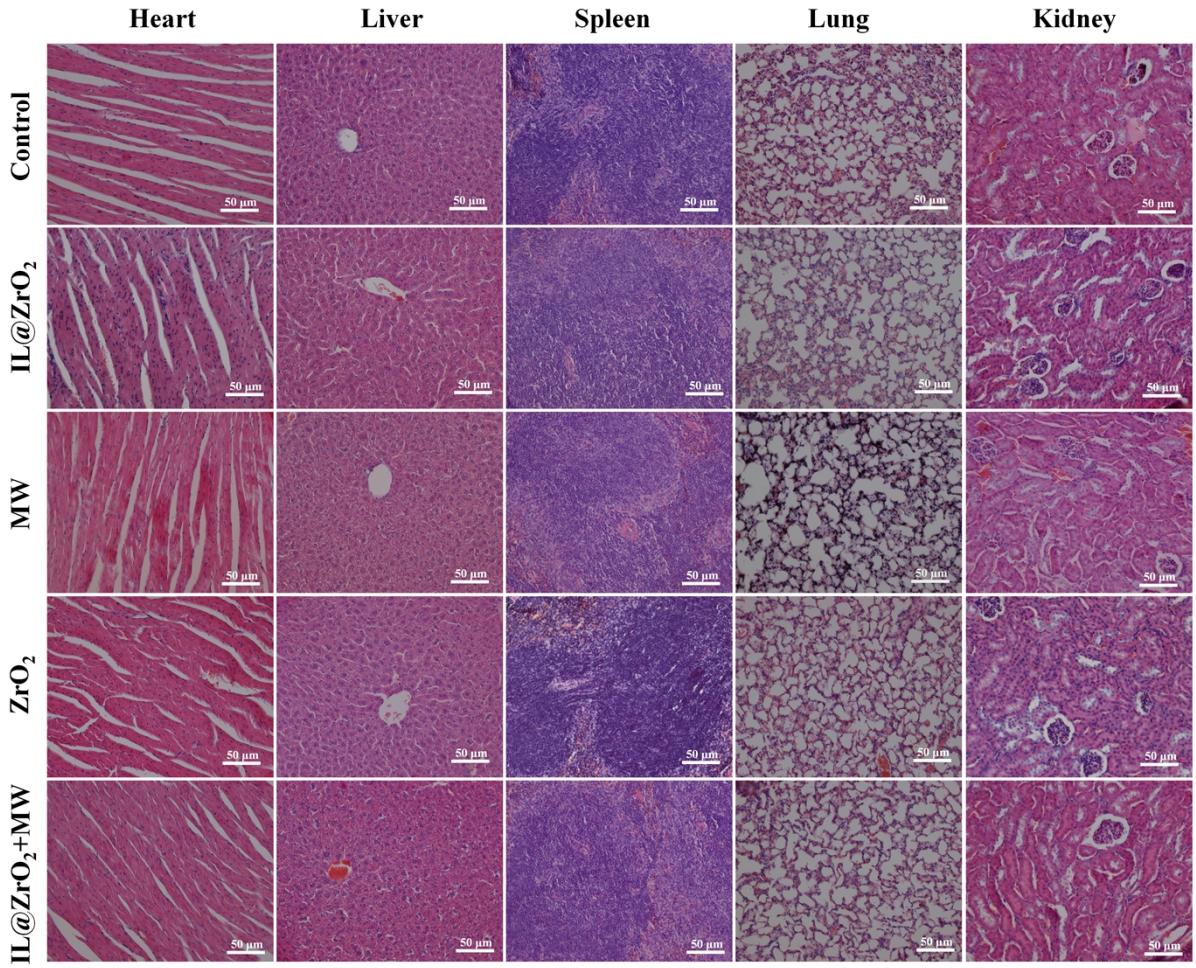

Fig. S3 Toxicity evaluation of IL@ZrO_2 via histological study. Histological section of heart, liver, spleen, lung and kidney obtained from healthy ICR mice in each group after excision in 16 days.

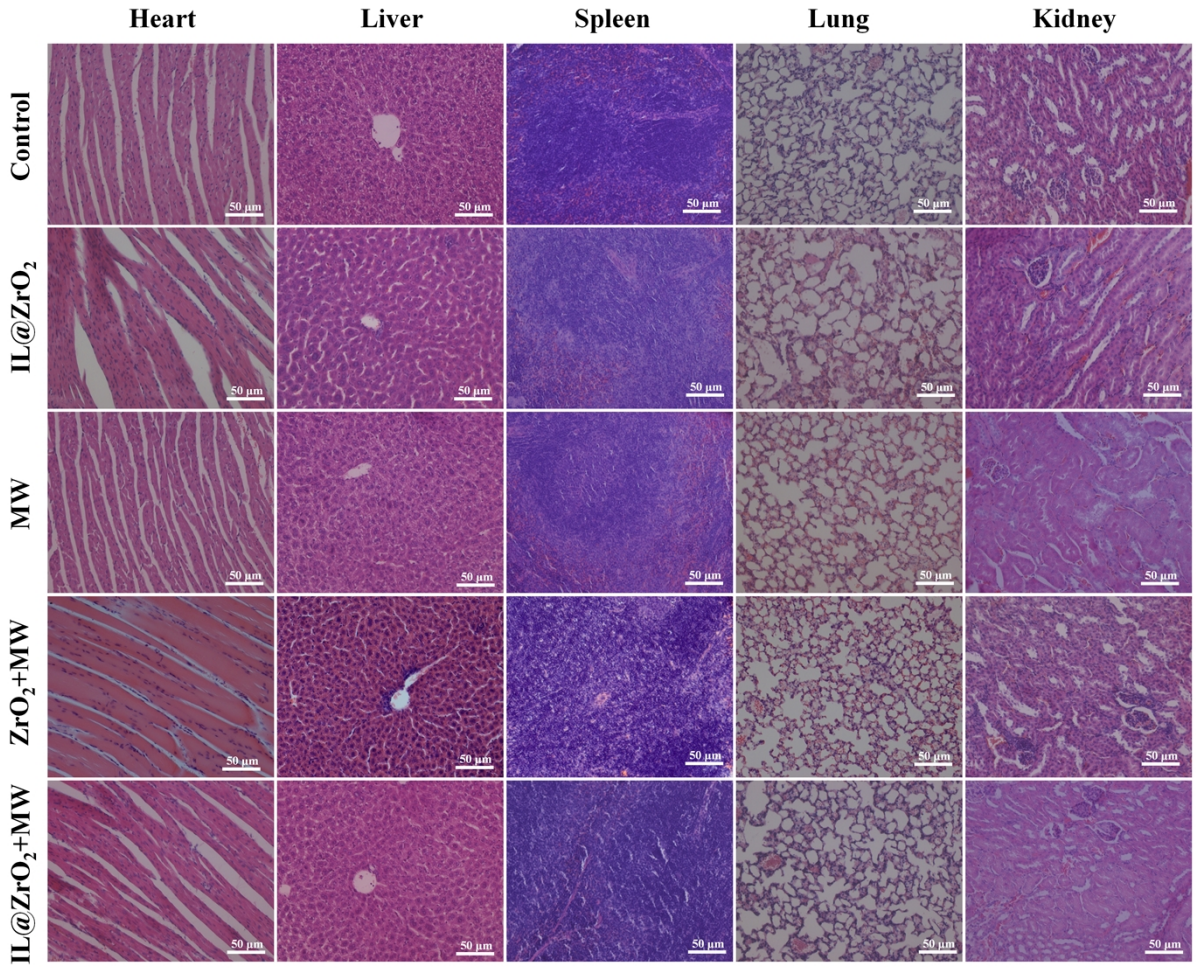

Fig. S4 Evaluation of microwave thermal therapy efficiency *in vivo* via histological study. Histological section of heart, liver, spleen, lung, and kidney obtained from ICR mice in each group after excision in 16 days.

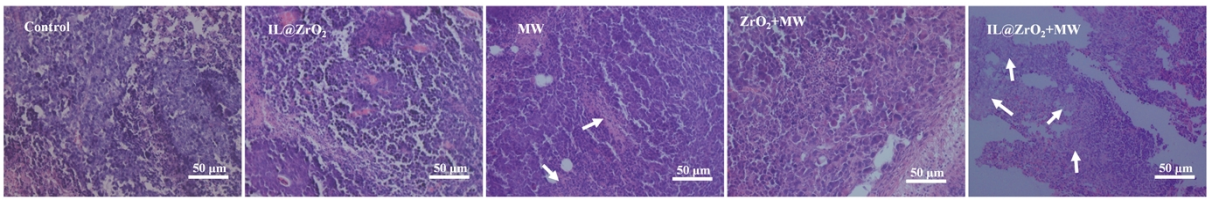

Fig. S5 Evaluation of microwave thermal therapy efficiency *in vivo* via histological study. Histological section of tumor obtained from ICR mice in each group after excision in 16 days.

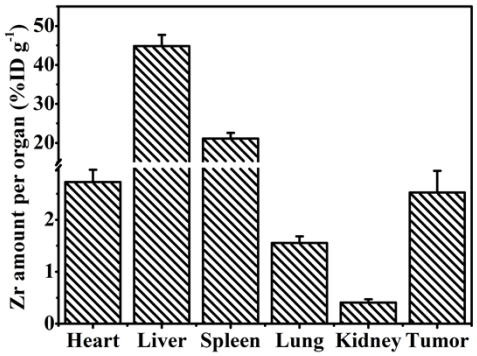

Fig. S6 ICP-MS analysis results of IL@ZrO_2 levels in tissues of ICR mice, including heart, liver, spleen, lung, kidney and tumor, 12h post intravenous injection.

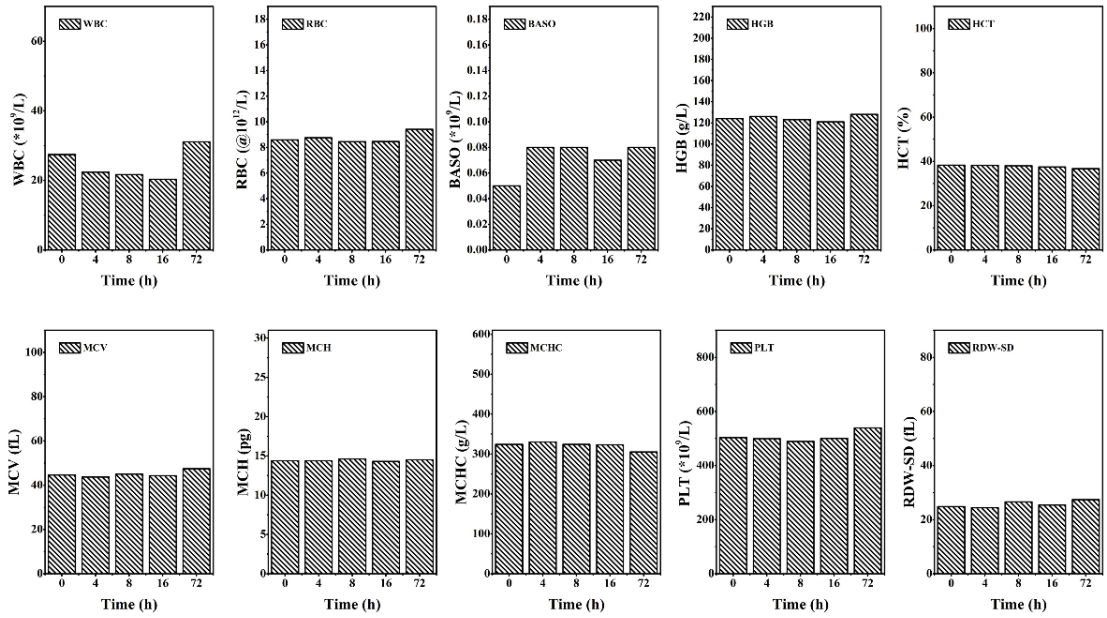

Fig. S7 Hematology biochemical indicators at different time points prior to and post injection.

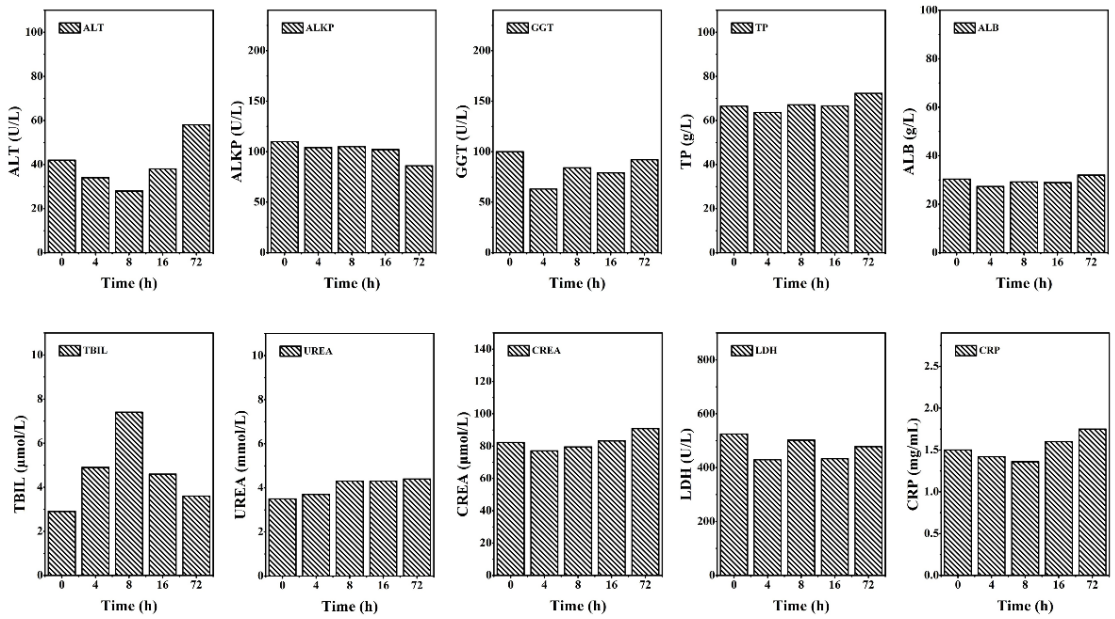

Fig. S8 Serum biochemical indicators at different time points prior to and post injection.

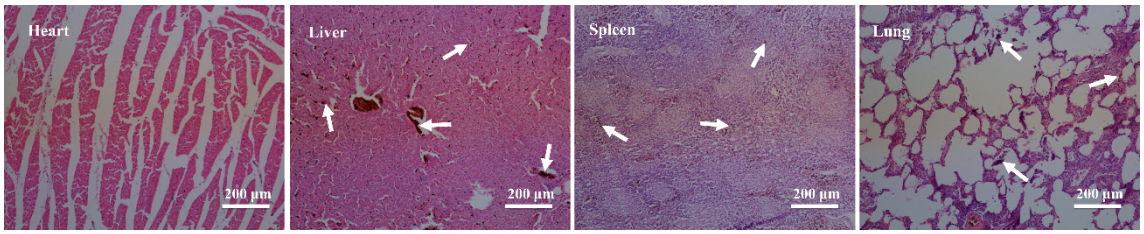

Fig. S9 Histological section of heart, liver, spleen and lung obtained from mini swine after excision in 10 days.