

Electronic Supplementary Information for

An EPR study on the radiolysis of isolated ethanol molecules in solid argon and xenon: matrix control of radiation-induced generation of radicals in cryogenic media

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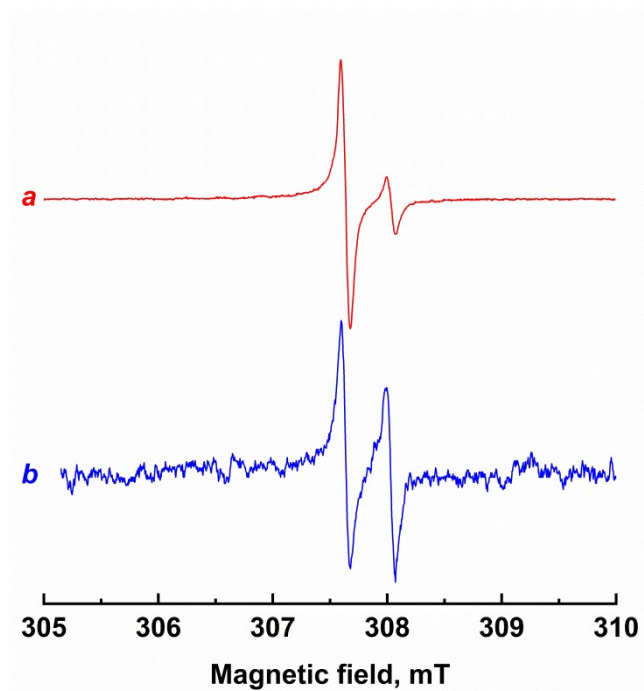


Fig. S1 Normalized EPR spectra (at 9.3790 GHz microwave frequency and 10.7 μ W microwave power) of the $\text{CH}_3\text{CH}_2\text{OH}/\text{Ar}$ 1:1000 (*a*) and $\text{CH}_3\text{CH}_2\text{OH}/\text{CFC1}_3/\text{Ar}$ 1:2:1000 (*b*) samples after 15 min irradiation with X-rays showing the low-field component of the signal of hydrogen atoms. The spectra were recorded at different gains at 7 K.

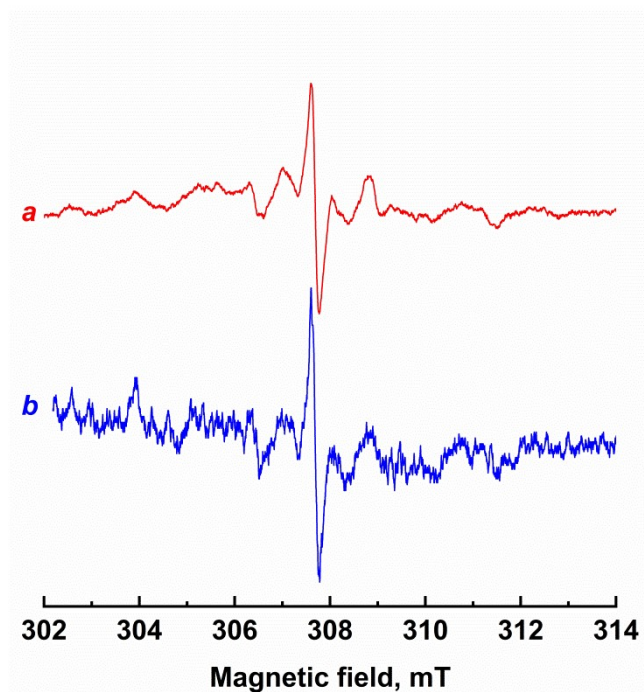


Fig. S2 Normalized EPR spectra (at 9.3820 GHz microwave frequency and 10.7 μ W microwave power) of the $\text{CH}_3\text{CH}_2\text{OH}/\text{Xe}$ (*a*) and $\text{CH}_3\text{CD}_2\text{OH}/\text{Xe}$ (*b*) 1:1000 samples after 10 min irradiation with X-rays showing the low-field component of the signal of hydrogen atoms. The spectra were recorded at different gains at 7 K.

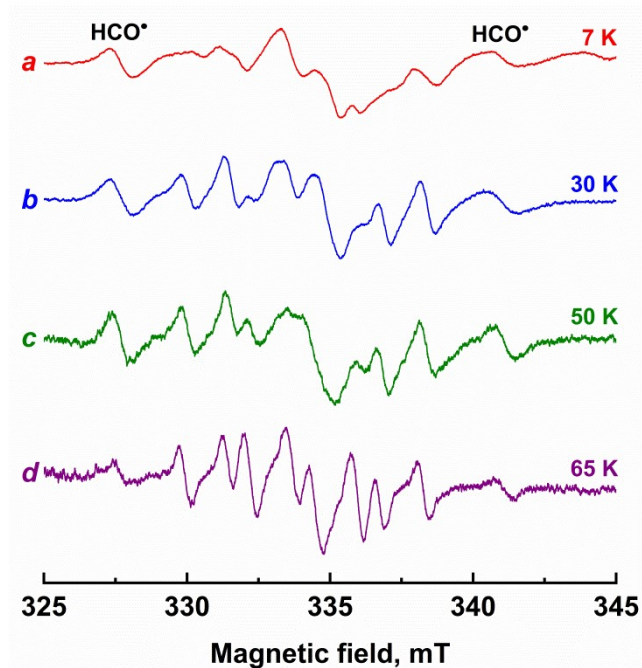


Fig. S3 Normalized EPR spectra (at 9.3799 GHz microwave frequency and 300 μ W microwave power) of the $\text{CH}_3\text{CH}_2\text{OH}/\text{Xe}$ 1:1000 samples after 20 min irradiation with X-rays at 7 K (*a*) and recorded during the subsequent annealing at 30, 50, and 65 K (*b*, *c*, and *d*) showing the central region of the spectra.

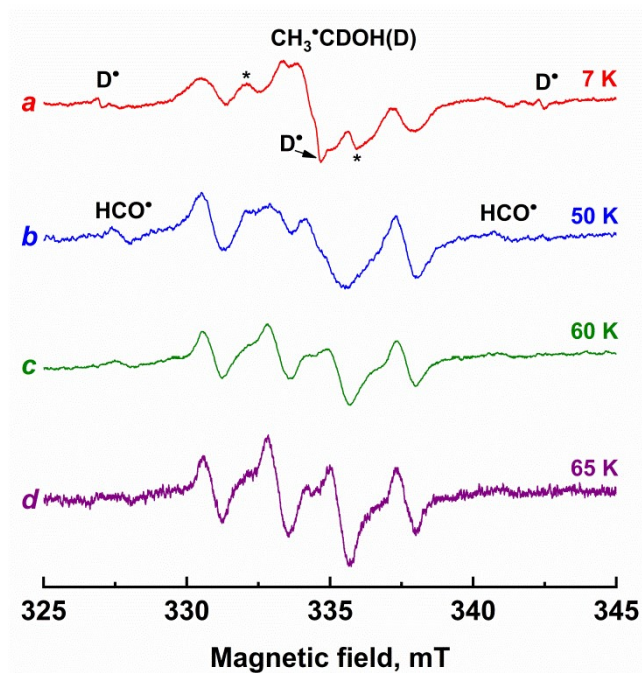


Fig. S4 Normalized EPR spectra (at 9.3761 GHz microwave frequency and 300 μ W microwave power) of the $\text{CH}_3\text{CD}_2\text{OH}/\text{Xe}$ 1:1000 samples after 10 min irradiation with X-rays at 7 K (*a*) and recorded during the subsequent annealing at 50, 60, and 65 K (*b*, *c*, and *d*) showing the central region of the spectra.

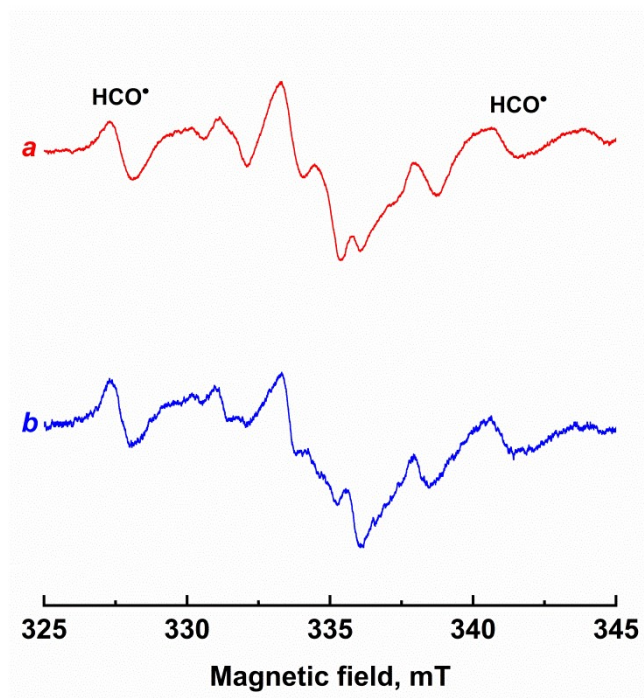


Fig. S5 Normalized EPR spectra (at 9.3799 GHz microwave frequency and 300 μ W microwave power) of the $\text{CH}_3\text{CH}_2\text{OH}/\text{Xe}$ 1:1000 (*a*) and $\text{CH}_3\text{CH}_2\text{OH}/\text{CFCl}_3/\text{Xe}$ 1:2:1000 (*b*) samples after (a) 20 and (b) 30 min of irradiation with X-rays showing central region of the spectra. The spectra were recorded at different gains at 7 K.