

1 Supplemental

2 Insights into the influences of dissolved gases on the production of ultrasonic- 3 activated water in a novel double-bath-type sonoreactor

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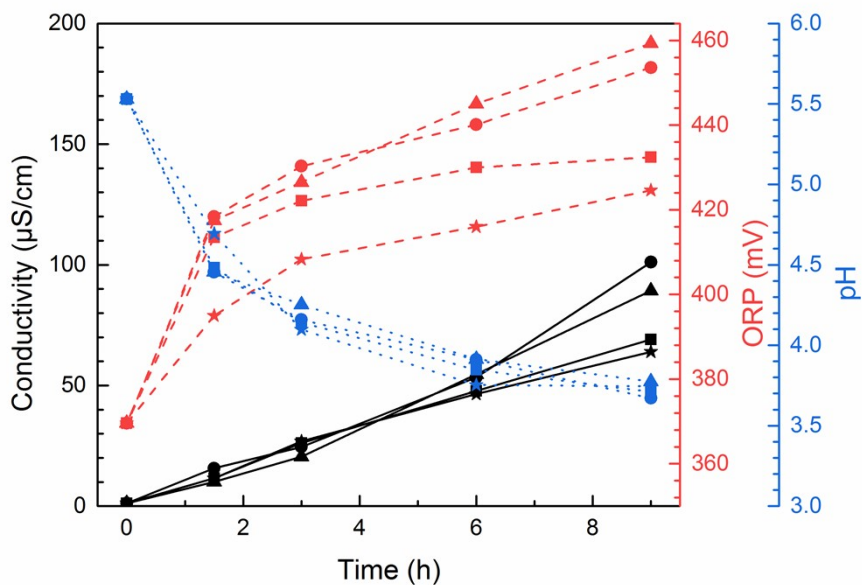
11 + Those authors contributed equally



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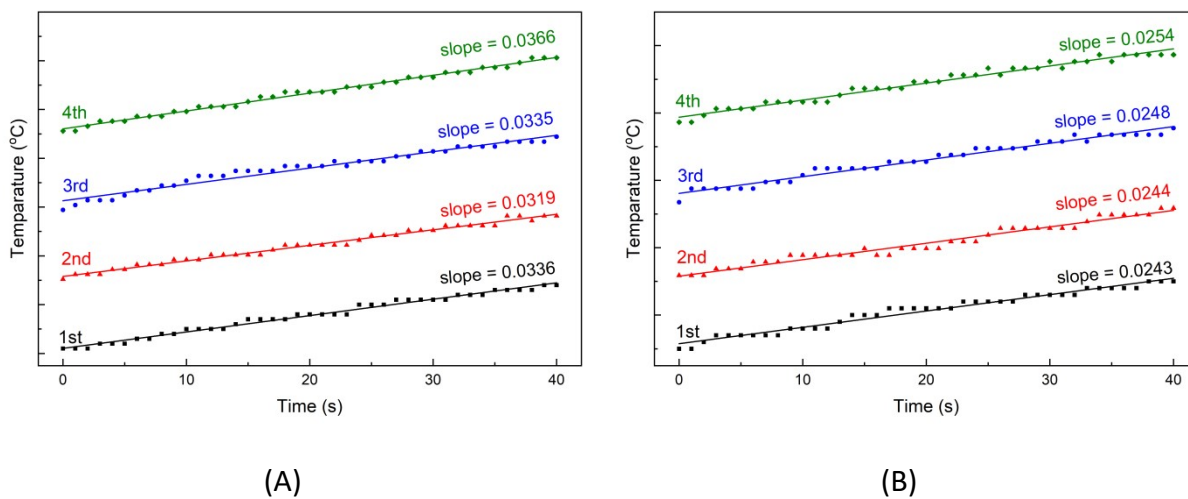
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Figure S1. Photo of the 100-mL and 150-mL Erlenmeyer flasks

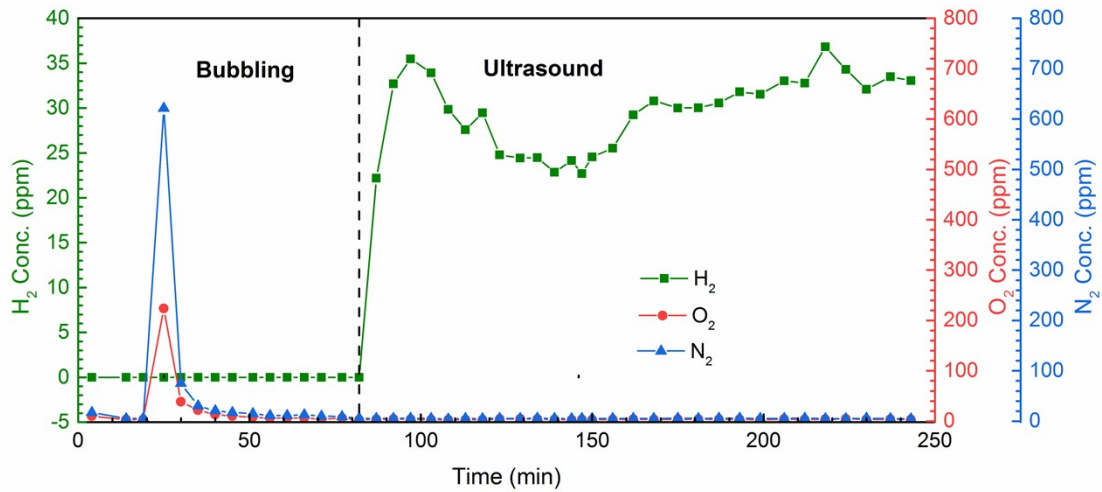


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2 **Figure S2.** Conductivity, ORP and pH values of ultrasonic-activated water (UAW) at different
 3 sonication time under air bubbling of 5 ml/min (square symbol), 10 ml/min (circle symbol),
 4 20 ml/min (triangle symbol) and air purging of 20 ml/min (star symbol)



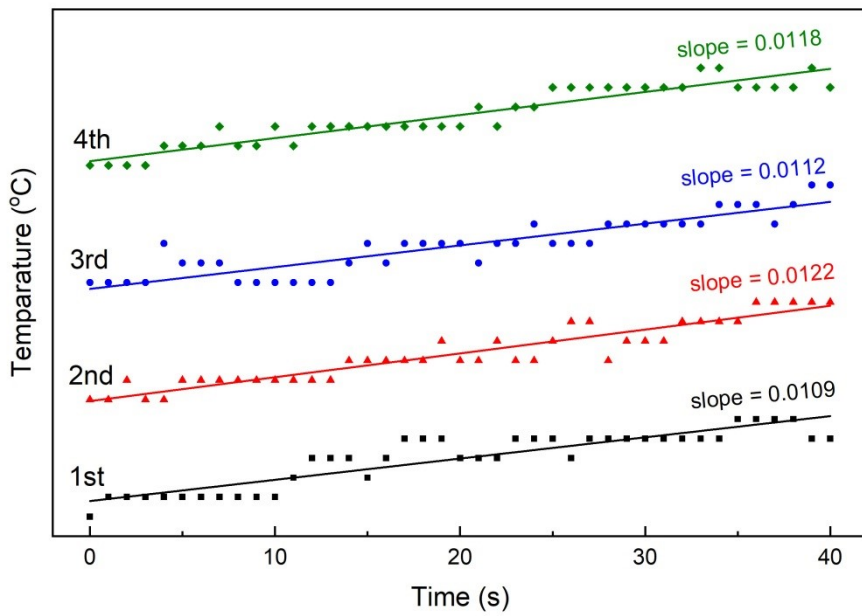
5 **Figure S3.** Time-temperature profiles obtained from calorimetric tests in the presence (A)
 6 and absence (B) of a bubbling tube



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Figure S4. Concentration of gaseous products at bubbling and sonication stages



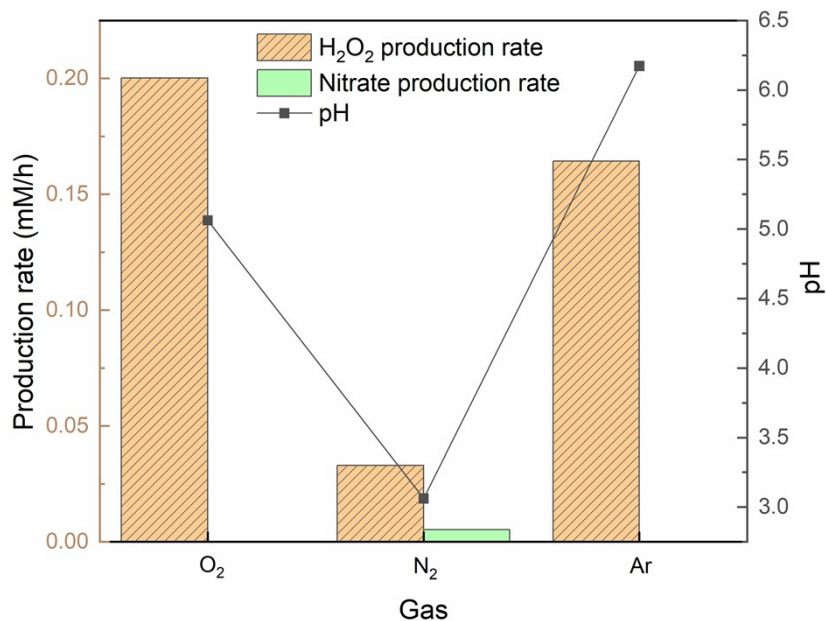
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Figure S5. Time-temperature profiles obtained from calorimetric tests in a 150 mL-

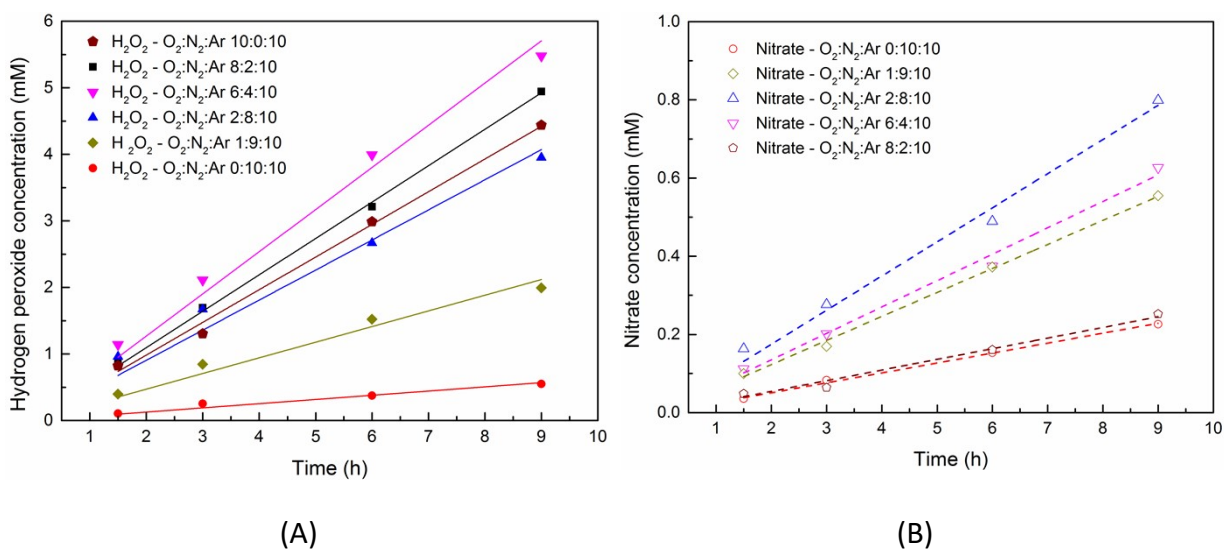
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Erlenmeyer flask

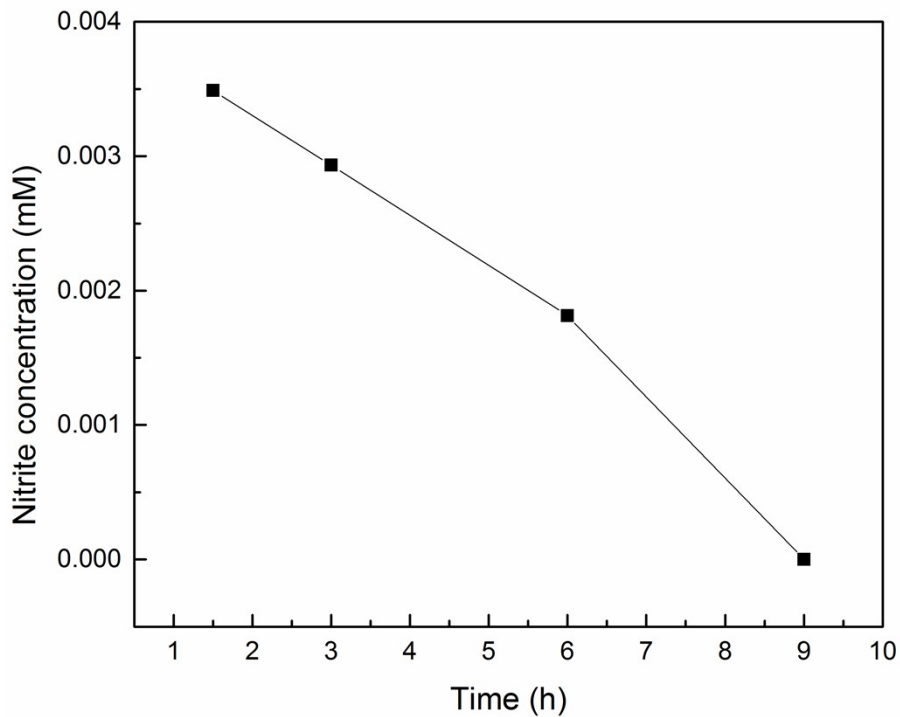


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2 **Figure S6.** Effect of dissolved gases on the production rate of hydrogen peroxide and nitrate
 3 and pH of UAW

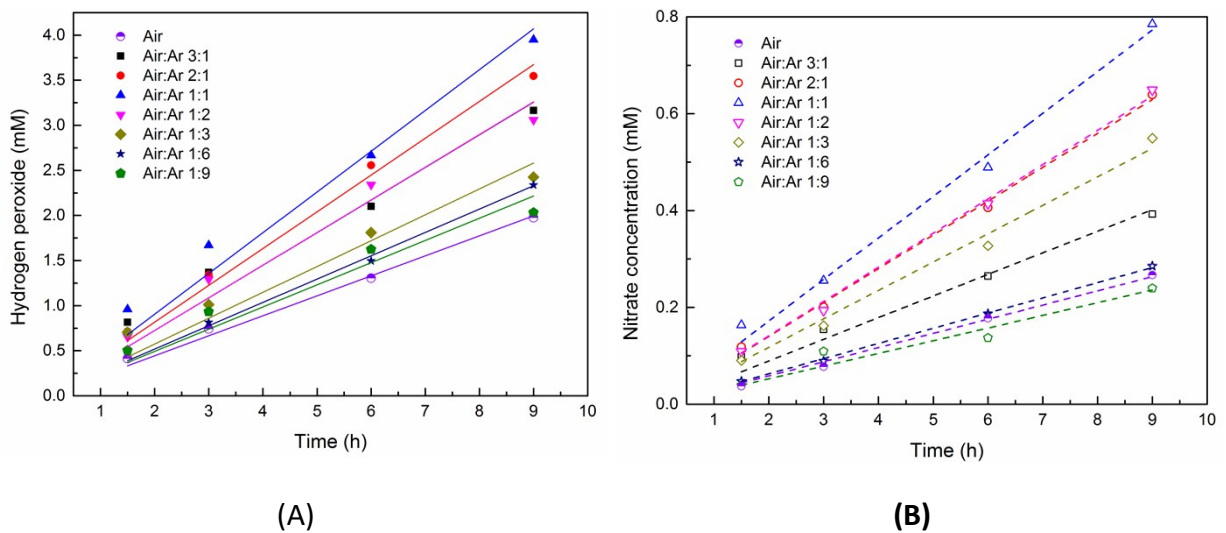


4 **Figure S7.** Concentration of (A) hydrogen peroxide and (B) nitrate with sonication time using
 5 different O₂ - N₂ - Ar mixtures



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2 **Figure S8.** Concentration of nitrite with sonication time under N₂ - argon mixture (volume
 3 ratio of O₂:N₂:Ar is 0:10:10)



4 **Figure S9.** Concentration of (A) hydrogen peroxide and (B) nitrate with sonication time using
 5 different air-argon mixtures

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