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Interactive comment on “Secondary organic material formed by methylglyoxal in aqueous aerosol mimics – Part 1: Surface tension depression and light-absorbing products” by A. N. Schwier et al.

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This is an interesting paper and we only have one comment regarding the discussion of the reaction taking place.

This paper proposes that this reaction is “aldol condensation (...) involving (...) the ammonium ion”. Since the identification of this reaction is not the focus of this paper, this suggestion is mostly supported by previous works, which, for most of them, are properly referred to – and we appreciate this.

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However, because the discussion refers specifically to aldol condensation mediated by NH_4^+ , it would be important to also quote the discussion paper presenting this exact topic (Noziere et al, ACPD, 9, 1, 2009) and the patent reporting the corresponding discovery in 2007 (Nozière & Córdova, A novel catalyst for aldol condensation reaction, WO2009045156, 2007), both of central relevance to this paper and publically available. As these publications are the first to introduce the concept of catalysis of aldol condensation by NH_4^+ , omitting them could give the reader the mistaking impression that this concept is presented here for the first time, which would not be correct.

These references would only reinforce this paper, as they provide all the facts supporting the catalysis of aldol condensation by NH_4^+ (identification of products by NMR, rate constants demonstrating the catalytic effect of NH_4^+ . . .), and would therefore spare the authors from having to make this type of demonstration all over again in the present paper.

Thank you in advance for including these references (we are also posting a similar comment to paper # 2).

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 15541, 2009.

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