

Interactive comment on “The oleic acid-ozone heterogeneous reaction system: products, kinetics, secondary chemistry, and atmospheric implications of a model system – a review” by J. Zahardis and G. A. Petrucci

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The large amount of work performed on the heterogeneous interaction of ozone with oleic acid in recent years justifies a review, and the authors are to be congratulated on pulling together a large body of work. For a review to achieve its maximum potential, it needs to cover all the relevant literature, identify key ideas and should apportion credit for discovery. In that spirit, I draw the attention of the authors to the papers listed below. The idea that aerosols would have an organic coating is attributable to the last reference below. Those authors, however, concluded that the result would be

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a microphysically, optically and chemically inert grease ball. The penultimate article agreed that there would be a surfactant coating, but argued that as it oxidized it would become optically and microphysically active. The 11th and 18th papers are important for showing clearly that n-fatty acids do indeed form coatings on aerosols, both marine and terrestrial. Most of the remainder describe a significant body of laboratory work. Atmos. Env., 40(34), 6606-6614 [November 2006] - I realize this is too recent. J. Phys. Chem. A, 110, 7581-7587 [2006]; Chem. Revs., 106, 1445-1461 [2006]; J. Geophys. Res., 110, Art. No. D06207 [25 March 2006]; Atmos. Chem. Phys., 4, 2083-2089 [2004]; J. Colloid Interface Sci., 280, 234-243 [2004]; Atmos. Env., 38, 1367-1378 [2004]; J. Phys. Chem. A, 107, 11038-11042 [2003]; Atmos. Env., 37, 3529-3537 [2003]; Atmos. Env., 37, 2207-2219 [2003]; J. Geophys. Res., 107 (D16), Art. No. 4319 [31 August 2002]; J. Geophys. Res., 107 (D7-8), Art. No. 4053 [April 2002]; J. Phys. Chem. A, 106, 982-987 [2002]; J. Geophys. Res. 104, 11633-11641 [1999]; J. Phys. Chem. A, 103, 871-876 [1999]; Revs. Geophys., 21, 903-920 [1983].

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