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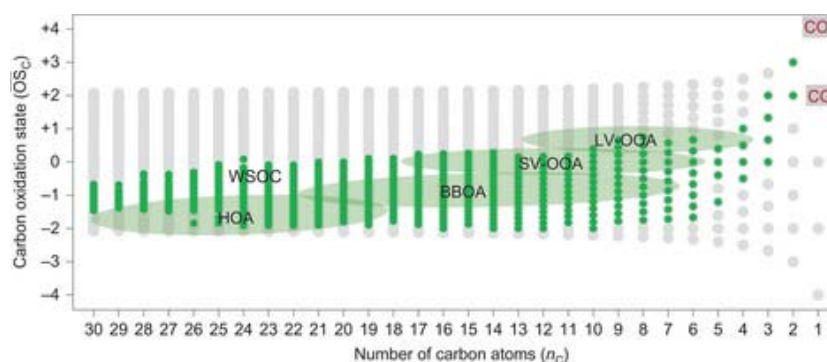
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Prof. Jimenez published in Nature Chemistry



Prof. Jimenez has published a paper in Nature Chemistry, entitled "Carbon Oxidation State as a Metric for Describing the Chemistry of Atmospheric Organic Aerosol" by J.H. Kroll, N.M. Donahue, J.L. Jimenez, S.H. Kessler, M.R. Canagaratna, K.R. Wilson, K.E. Altieri, L.R. Mazzoleni, A.S. Wozniak, H. Bluhm, E.R. Mysak, J.D. Smith, C.E. Kolb, and D.R. Worsnop. The paper can be accessed [at this link](#).



The abstract of the paper reads: "A detailed understanding of the sources, transformations and fates of organic species in the environment is crucial because of the central roles that they play in human health, biogeochemical cycles and the Earth's climate. However, such an understanding is hindered by the immense chemical complexity of environmental mixtures of organics; for example, atmospheric organic aerosol consists of at least thousands of individual compounds, all of which likely evolve chemically over their atmospheric lifetimes. Here, we demonstrate the utility of describing organic aerosol (and other complex organic mixtures) in terms of average carbon oxidation state, a quantity that always increases with oxidation, and is readily measured using state-of-the-art analytical techniques. Field and laboratory measurements of the average carbon oxidation state, using several such techniques, constrain the chemical properties of the organics and demonstrate that the formation and evolution of organic aerosol involves simultaneous changes to both carbon oxidation state and carbon number."

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