



Supplement of

Measurement report: New insights into the mixing structures of black carbon on the eastern Tibetan Plateau – soot redistribution and fractal dimension enhancement by liquid–liquid phase separation

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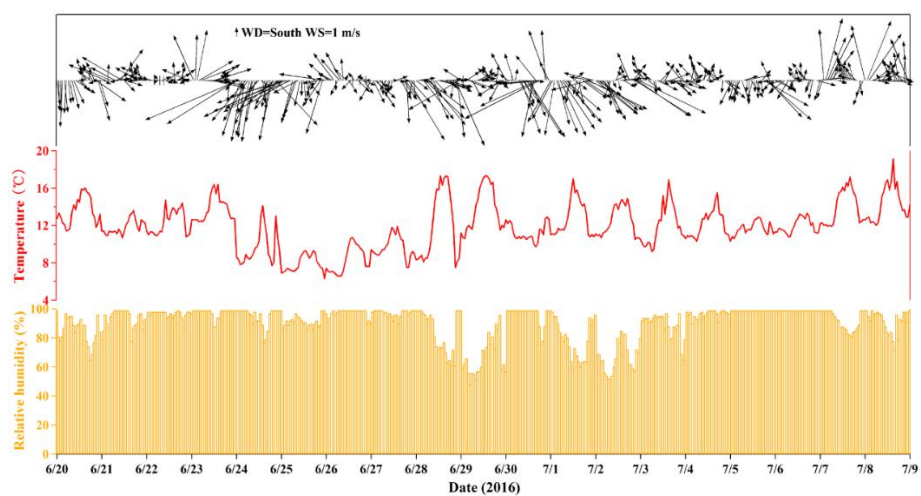


Figure S1. Weather conditions during sampling period, including relative humidity (RH), temperature (T), wind speed (WS) and wind direction (WD).

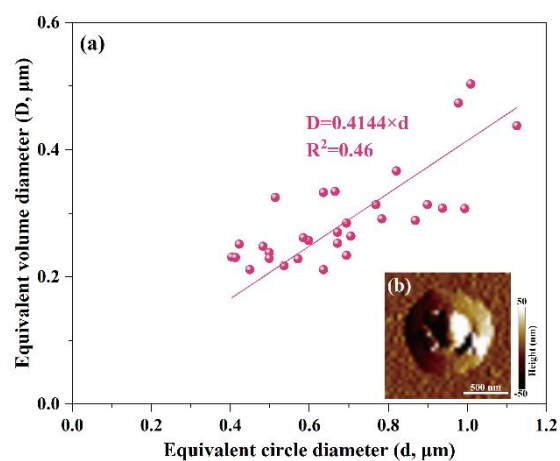


Figure S2. (a) The correlation of equivalent circle diameter (ECD, d) and the equivalent volume diameter (EVD, D) obtained by AFM. (b) An AFM image of an OM-coating particle.

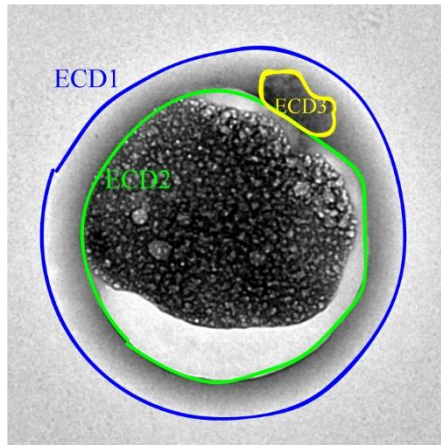


Figure S3. The calculation diagram of the ratio of OM coating thickness to soot size (OM/soot) of a typical S-soot-OM-coating particle. $OM/soot = [0.4144(ECD1-ECD2)/2]/ECD3$

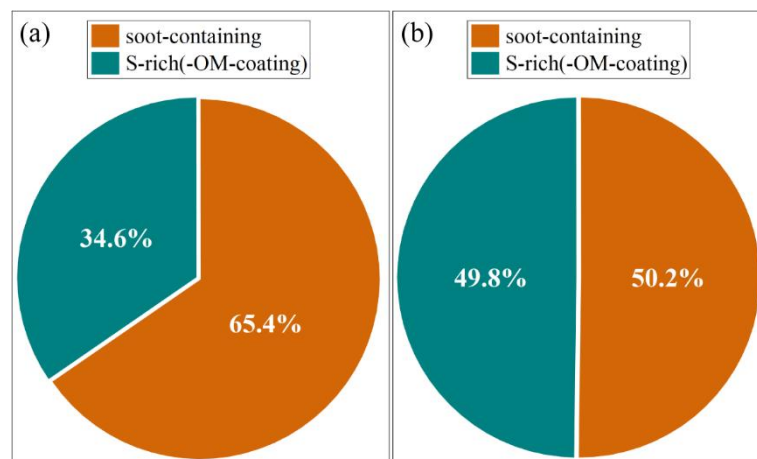


Figure S4. (a) Relative abundance of soot-containing particles at Mt. Emei site during the eastern basin trajectories prevailing. (b) Relative abundance of soot-containing particles at Mt. Emei site during the western TP trajectories prevailing.

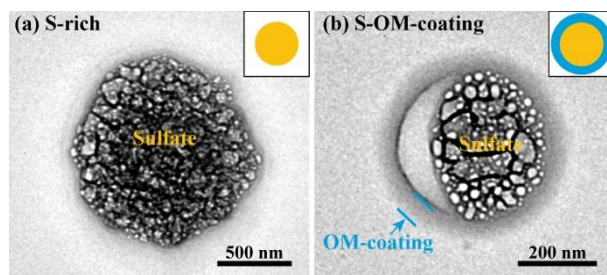


Figure S5. The other two major types of individual particles besides soot-containing particles in this study. (a) S-rich, which is mainly produced by SO_2 conversion and appears as cystose mass under electron beam. (b) S-OM-coating, which appears a core-shell structure with a sulfate core and an OM-coating. All the conceptual graphs are placed in the top right corner of each image. The yellow circles and blue rings represent sulfate and OM-coatings, respectively.