Supplementary Material
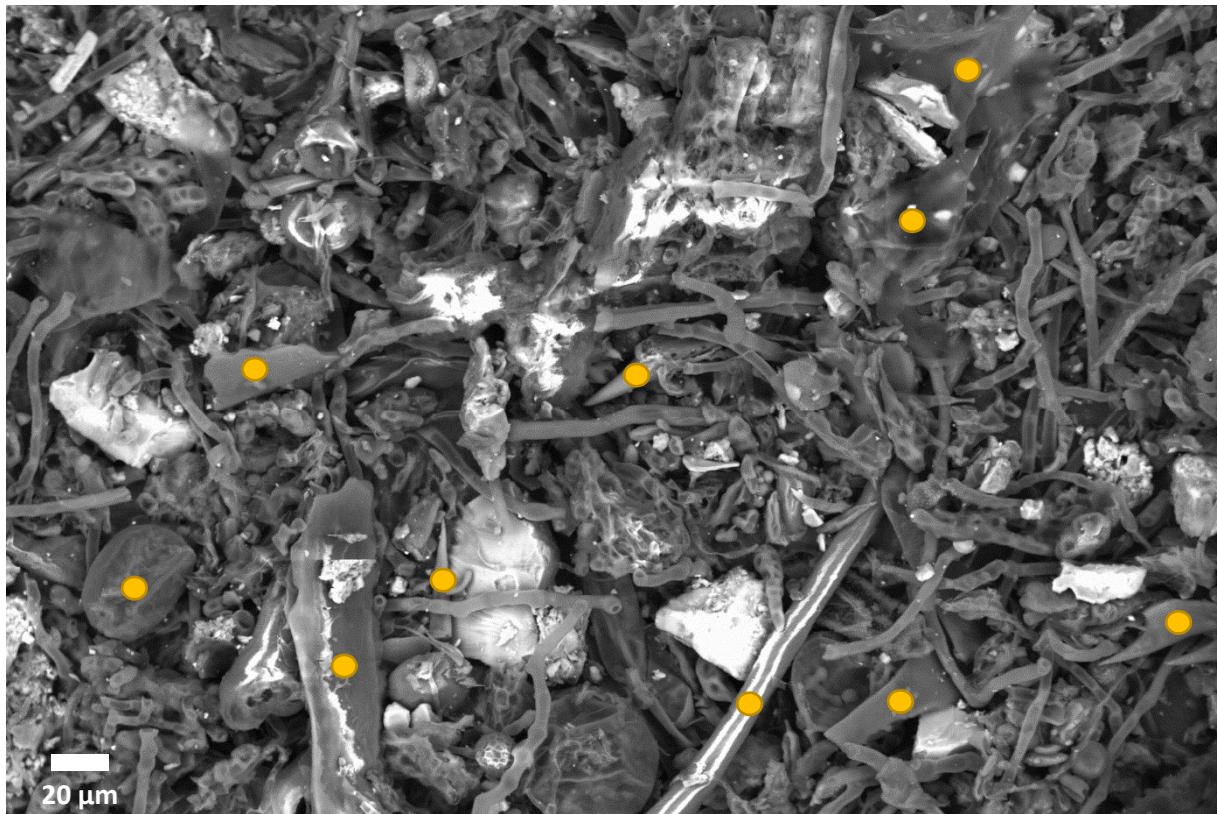
Figure S1: Overview of harvesting dust bulk sample from scanning electron microscopy – yellow dots highlight plant material (awns, plant cell remains, plant hair*)*
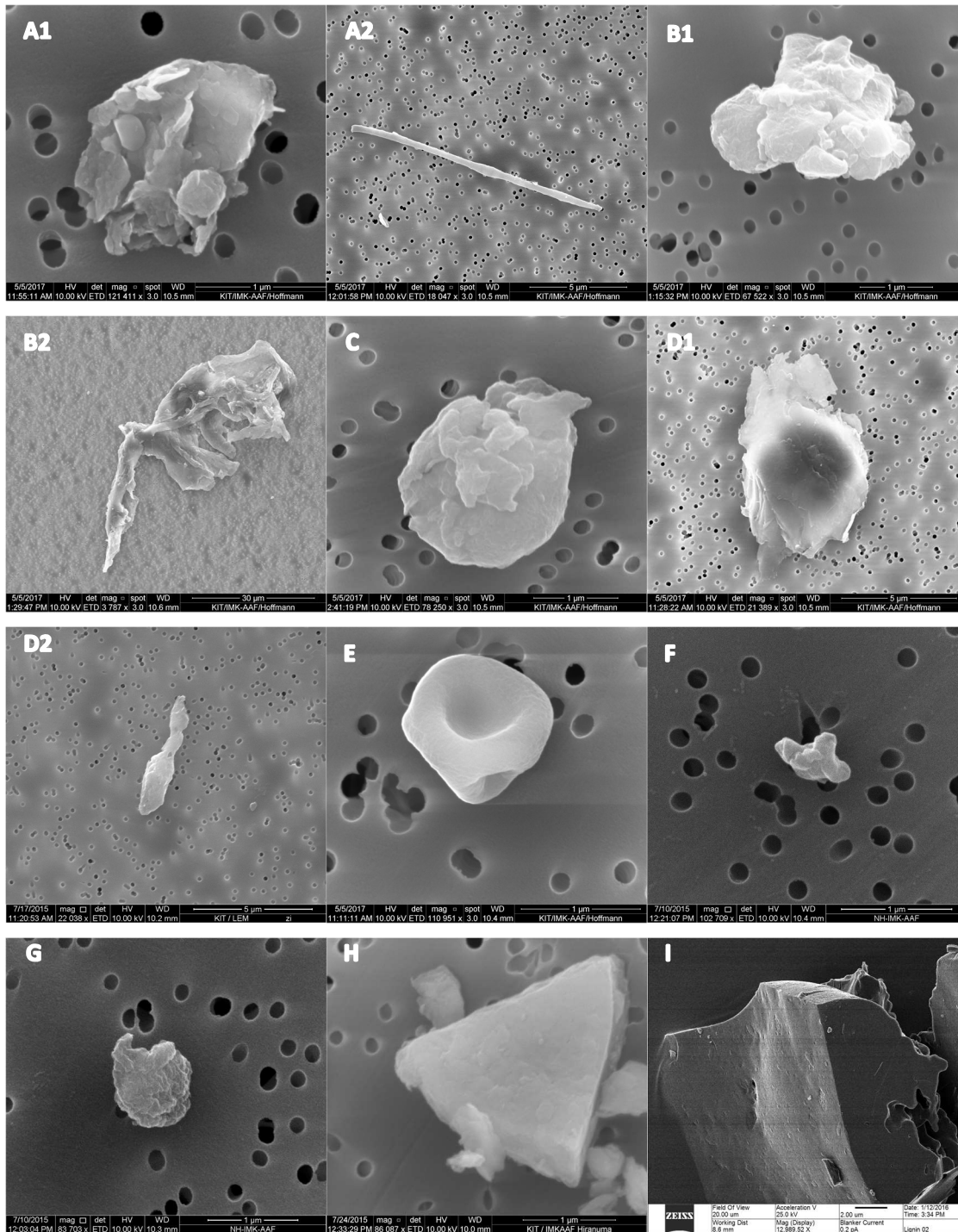
Figure S2: Scanning electron microscopy images of particles from the AIDA cloud chamber: (A1 and A2) harvesting dust, (B1 and B2) leaf litter, (C) rice protein, (D1 and D2) soy protein, (E) alginate, (F) pectin, (G) carnauba wax, (H) sugar beet soil dust; (I) high resolution helium ion microscopy image of an individual lignin particles