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Chalcophile Element Accretion from the Late Veneer.

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Either the Earth accreted mostly from refractory building blocks and volatile elements were delivered late after core formation had ceased [e.g.: 1, 2] or volatile rich material accreted during the main stages of accretion with core formation being active [3 - 5]. Understanding the partitioning behavior of volatile elements that are also siderophile and/or chalcophile (S, Se, Te, Tl, Ag, Au, Cd, Bi, Pb, Sn, Cu, Ge, and In) may provide key information in this regard. We observe that various mass fractions of different meteorites are needed during a possible late veneer event to explain the bulk silicate Earth element abundances.

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