Starukhina L. V.  Shkuratov Yu. G.  
*Global Mixing as a Mechanism for Compositional Anomalies of Agglutinitic Glasses [#1497]*  
Our simulation of the chemical evolution of a regolith particle exposed to lunar exosphere and to fine dust particles of ejecta have shown that global mixing can account for the difference in the composition observed for agglutinitic glasses as compared to the bulk of mare and highland lunar soils.

Levine J. Muller R. A.  Renne P. R.  
*Electron Microscopy of Apollo 12 Glass Spherules [#1033]*  
We present electron microscopic data on Apollo 12 spherules indicating that nearly all are derived from impacts. We are dating the spherules to study the bombardment history of the Moon.

*40Ar-39Ar Geochronology on Apollo 12 Regolith [#1365]*  
An alkali anorthosite fragment from Apollo 12 yields a plateau age of 3.09 Ga and it’s the youngest age reported for an anorthosite. Other ages suggests that most of the nonmare materials are associated with an 800 Ma event, probably Copernicus.

Pieters C. M.  Taylor L. A.  McKay D. S.  Morris R. V.  Keller L. P.  
*LSCC Apollo and Luna Soil Analyses: Update of Soil Evolution Model [#1336]*  
Preliminary LSCC data for three Luna soils are presented. Trends compare well to similar Apollo data. The soil evolution model requiring lateral transport and preferential melting for agglutinitic glass remains intact, but is not strengthened.

Nelson R. M.  Hapke B. W.  Smythe W. D.  Hale A. S.  Piatek J. L.  
*Planetary Regolith Microstructure: An Unexpected Opposition Effect Result [#1089]*  
The reflectance where the coherent backscattering is greatest is where the contribution of second order scattering is largest relative to the other orders.

Klima R. L.  Pieters C. M.  
*Infrared Spectroscopy on a Microscopic Scale: Investigating the Technique of Microspectroscopy and Its Application to a Lunar Breccia [#1305]*  
FTIR microspectroscopy in reflectance mode allows high spatial resolution, non-invasive compositional investigations in the mid infrared. This technique may provide greater insight into the processes of brecciation and regolith formation on the Moon.

Patchen A. P.  Taylor L. A.  
*The Most Reduced Rock from the Moon — Apollo 14 Basalt 14053: Extreme Reduction Entirely from a Re-Heating Event [#1762]*  
Hi-Al basalt 14053 contains evidence for extreme reduction of fayalite and spinels. However, this is a normal basalt, with the superposition of a secondary reduction process involving solar-wind hydrogen reduction of these phases during an entirely later reheating event.