Gaffey M. J.
Space Weathering and the Analysis of Asteroid Reflectance Spectra [#2144]
Space weathering on asteroids 243 Ida and 433 Eros differs from each other and from the Moon. This adversely affects curve matching analyses, but not analyses based on diagnostic spectral parameters such as band centers and band area ratios.

Nimura T. Hiroi T. Pieters C. M. Abe M.
An Application of a Unified Model of Intimate Mixing, Space Weathering, and Modified Gaussian Deconvolution to a Ground-based Spectra of Asteroids [#2711]
The purpose of this study is to make a unified model of intimate mixing, space weathering, and modified Gaussian model for estimating the composition, structure, and degree of space weathering and apply it to some ground based spectra of asteroids.

Mid-Infrared Imaging for Surface Thermal Inertia and Material of Near-Earth Asteroid in Hayabusa-2 [#2132]
A mid-infrared imager is now proposed for thermal emission imaging of a C-class NEO in Hayabusa-2. The instrument is based on the LIR (long-infrared imager) onboard Akatsuki, adding a 8-point filter wheel will extend its observational function for material classification.

Takeuchi H. Miyamoto H. Maruyama S.
Origins of Bright Spots on the Surface of Boulders Covering Asteroid Itokawa. [#1578]
We examine the enigmatic features (bright spots) observed on the surface of boulders on asteroid Itokawa and conclude that bright spots are micro-craters formed by impacts of micrometeoroids on the surfaces of boulders.

Maruyama S. Miyamoto H. Takeuchi H. Oku M.
Evidence for Global-Scale Inverse Grading of Regolith Materials on Asteroid Itokawa [#1577]
We analyzed the asteroid Itokawa to assess the nature and structure of the surface material. Detailed geological mapping was performed using high-resolution images. The results imply the existence of a global inverse graded regolith layer.

Korycansky D. G. Asphaug E.
Rubble-Pile Calculations with the Open Dynamics Engine: Benchmarks and Angle-of-Repae Tests [#1156]
We present benchmarks and angle-of-repose tests for simulations of rigid-body dynamics using the Open Dynamics Engine (ODE).

Hartmann O. Neukum G.
Impact-Chronology Model as Mass-Estimate Method for Impacted Masses on Planetary Surfaces [#2082]
The estimate of impacted masses on the surfaces of planetary bodies by application of recent lunar-like impact-chronology models will lead to the mass-depletion and time-constraints of the major impactor-source which is considered to be the asteroid belt.

Clark C. S. Clark P. E.
Using Boundary-based Mapping to Determine the Underlying Structure for Itokawa and Other Small Bodies [#1264]
We apply the constant scale natural boundary mapping technique to Itokawa, a very small, low density, and rough object interpreted as a rubble pile, as part of our ongoing effort for morphological, dynamic, and historical classification of asteroids.