Yang L. Ciesla F. J.
The Effects of Disk Building on the Chemical Evolution of the Solar Nebula [#1461]
We investigate the dynamical evolution of the solar nebula while it accretes material from its parent molecular cloud. We explore the implications for the chemistry, isotopic homogeneity and the preservation of early-formed solids in the nebula.

Hughes A. L. H. Armitage P. J.
Particle Concentration in an Evolving Disk: Implications for Early Accretion and Planetesimal Formation [#1847]
We model the radial drift and turbulent diffusion of particles in a one-dimensional viscously evolving and accreting gas disk to examine the potential for possibilities for dust-to-gas concentration above cosmic.

Collisional Growth Possibility of Dust Aggregates: A Bouncing Problem [#1717]
We carry out numerical simulations of collisions of aggregates with various coordination numbers to investigate the bouncing conditions and collisional growth possibility of dust in protoplanetary disks.

Eöry M. Futó P. Gucsik A.
Microstructural Evolution of the Fractal Dust Aggregates [#1023]
According to fractal dimension calculations, sticking and compaction may occur in case of low velocity collision of fractal dust aggregates due to energy dissipation and interdigitation.

Curtis S. A. Clark P. E. Minetto F. Nuth J. Marshall J.
SPARKLED: Dust Removal Tool and Implications for Solar System Formation [#1254]
We have had the first successful tests for a low power, lightweight electrostatically-based tool to remove dust in the airlock environment and, in the process, demonstrated plasma/dust interactions with implications for solar system formation.

Perry J. Matthews L. S. Hyde T. W.
Dipole-Dipole Interactions of Charged-Magnetic Grains [#2580]
The interaction between dust grains is an important process in planetesimal formation. This work considers the effects that electrostatic and magnetic forces, alone or in combination, can have on the coagulation of dust in various environments.

Wilson T. L.
Modelling Cosmic-Ray Effects in the Protosolar Disk [#1018]
The dynamic effects of cosmic rays during the evolution of protosolar disks and the origin of the solar system are addressed. Three computational categories are discussed: plasma transport codes, solar modulation codes, and Monte Carlo codes.

Boney E. T. D. Lyons J. R. Marcus R. A.
Self-Shielding of the $E(1)-X(0)$ Band of CO in a Hot Solar Nebular [#1999]
CO self-shielding at the X-point of the early nebula has been put forth as a possible mechanism to explain the slope-1 oxygen 3-isotope plot observed in CAIs. We are testing this hypothesis in multiple X-point geometries.