Chiang & Goldreich (1997)

* derive hydrostatic, radiative equilibrium models for passive disks around T Tauri stars
* assume flared disk rather than flat
* calculate the SED for the passive disk self consistently
* first assume blackbody disk
* for flat disk T\_e ~ a^(-3/4)
* hydrostatic equilibrium => flared disk
* then, drop blackbody assumption and determine the SED through radiative transfer
* assume that gas and dust temperatures are equal in the interior
* first consider flat disk, then flared
* compare with observations => the SED of GM Aur is consistent with a passive reprocessing disk

D’Alessio et al. (1998)

* accretion disk around T Tauri star taking into account accretional heating
* assume gas and dust in disk are well mixed and thermally coupled; disk receives radiation from the central star and through viscous dissipation, cosmic rays and radioactive decay
* energy transport through turbulent flux, radiation, convection
* steady state, disk geometrically thin, hydrostatic balance
* results for their fiducial model:
  + disk is optically thick to stellar radiation, but may be optically thin to its own radiation
  + temperature: for a < 5 AU, flaring not important => T ~ a^(-3/4) as in an irradiated flat disk
  + viscous dissipation is the main energy source for a < 2 AU
  + there is a disk atmosphere; there is also a temperature inversion due to stellar radiation
  + main improvement of this model is that they calculate the optical depth self-consistently rather than assume that the disk interior is optically thick
  + surface density consistent with analytic predictions
  + disk mass, timescales calculation
  + energy transport: convection only important in the midplane at a < 0.01 AU
  + gravitational stability: nonirradiated disk more likely to become gravitationally unstable at large a than irradiated disk

D’Alessio et al. (1999)

* use the disk model of D’Alessio et al. (1998) to explore how disk structure varies with alpha and Mdot
* compare with observations => models can explain near IR fluxed of T Tauri stars for disk accretion rates consistent with mean value estimates
* however, models seem to be too geometrically thick at large radii => dust settling could substantially reduce the geometric thickness of the disk => explore this in subsequent paper

D’Alessio et al. (2001)

* disk structure including dust grain growth
* still assume complete mixing between dust and gas
* find that the resulting disk models are less geometrically thick than in the case where ISM opacities are used, and they agree better with observed SED distributions

Visser et al. (2009)

* aim: understand how material changes chemically as it is transported from the molecular cloud to the star and the disk
* model the chemical evolution from the pre-stellar core to the disk phase in 2 D using a simplified semi-analytic model
* gas and dust are expected to be well-coupled => gas and dust temperatures are set to be equal
* the only chemical reactions they include are H20 and CO adsorption and desorption => total abundance of CO and H2O remains constant in each parcel
* CO and H2O begin entirely in gas phase