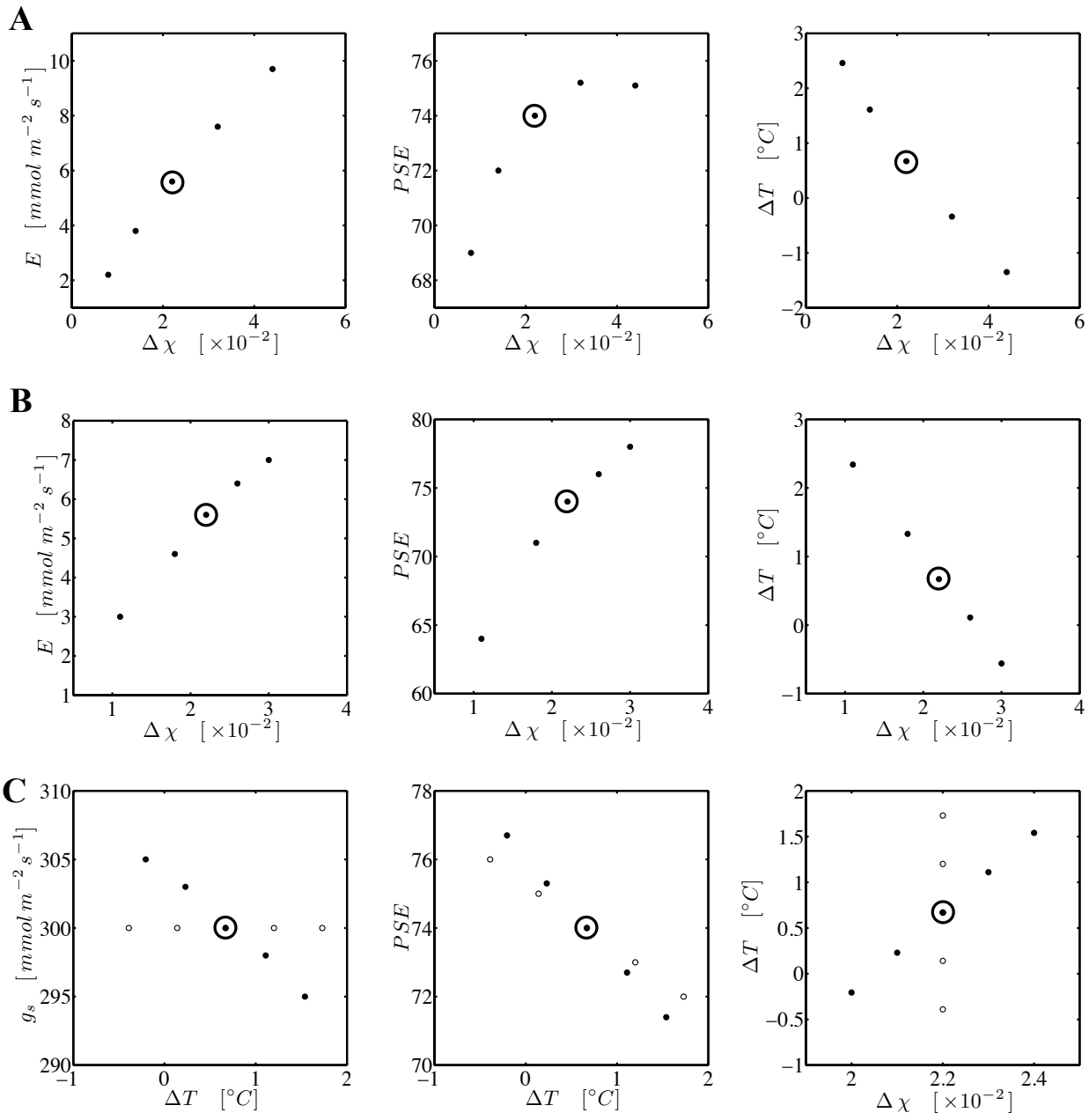

Figure S1 Modeled responses to variation in evaporative demand and absorbed radiation for an oak leaf. **A** Responses to changes in the leaf to air $\Delta\chi$ induced by variations in air temperature at constant ambient water vapor concentration (non-isothermal); **B** variations in ambient relative humidity and so $\Delta\chi$ at constant air temperature (isothermal); **C** variations in absorbed solar radiation, open markers 'o' indicate simulations for which air temperature was adjusted to conserve epidermal temperature. Circles mark the reference state of the exposed leaf model results based on actual conditions, T_{air} = 28.31°C, RH=43.7%, and $\dot{Q}$=394.7 J m^{-2} s^{-1}, with temperature variations of -10, -5, +5 and +10 °C (**a**), RH 85%, 60%, 30%, 15% (**b**), and $\dot{Q}$ -100, -50, +50, +100 J m^{-2} s^{-1}.