Fig. S1. Kohn-Sham eigenenergies as a function of time (a) and (c) for the 6 km/s *a*-axis collision of two additional trajectories, (b) and (d) for the 6 km/s *c*-axis collision of another two additional trajectories.
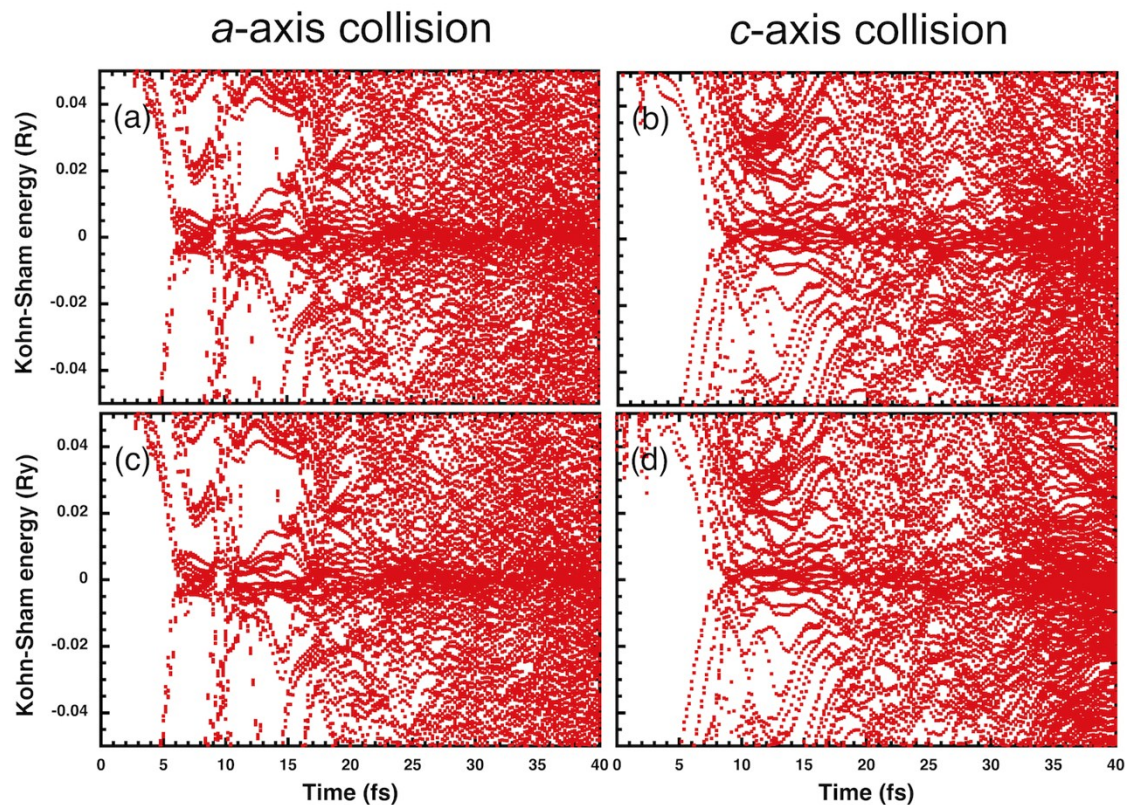
Fig. S2. Kohn-Sham eigenenergies as a function of time (a) and (c) for the 20 km/s *a*-axis collision of two additional trajectories, (b) and (d) for the 20 km/s *c*-axis collision of another two additional trajectories.