

Figure S1. Electrospray mass spectrum of an aqueous solution containing 10 mL of 0.1 mM solution of 9-ethylguanine with two drops of 0.1 mM KCl. Note that K(9eG)<sub>12</sub><sup>2+</sup> is the largest potassiated G-quadruplex detected.

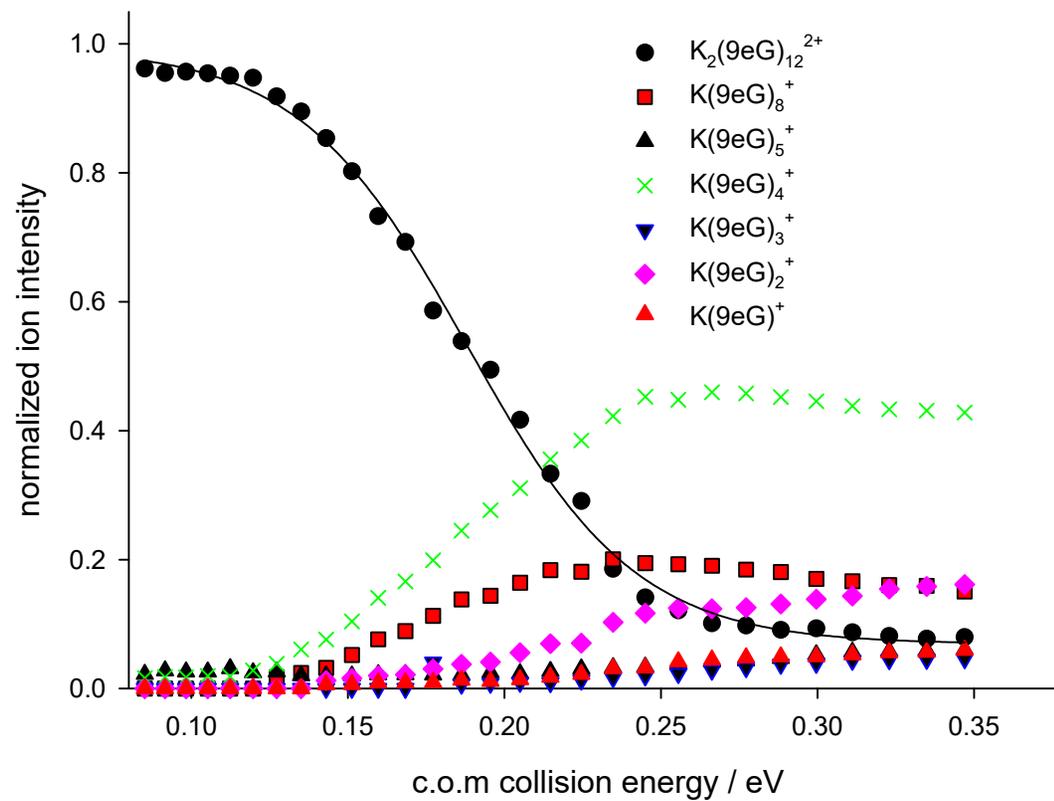


Figure S2. Energy resolved intensity profiles for SORI-CID of the  $K_2(9eG)_{12}^{2+}$ .

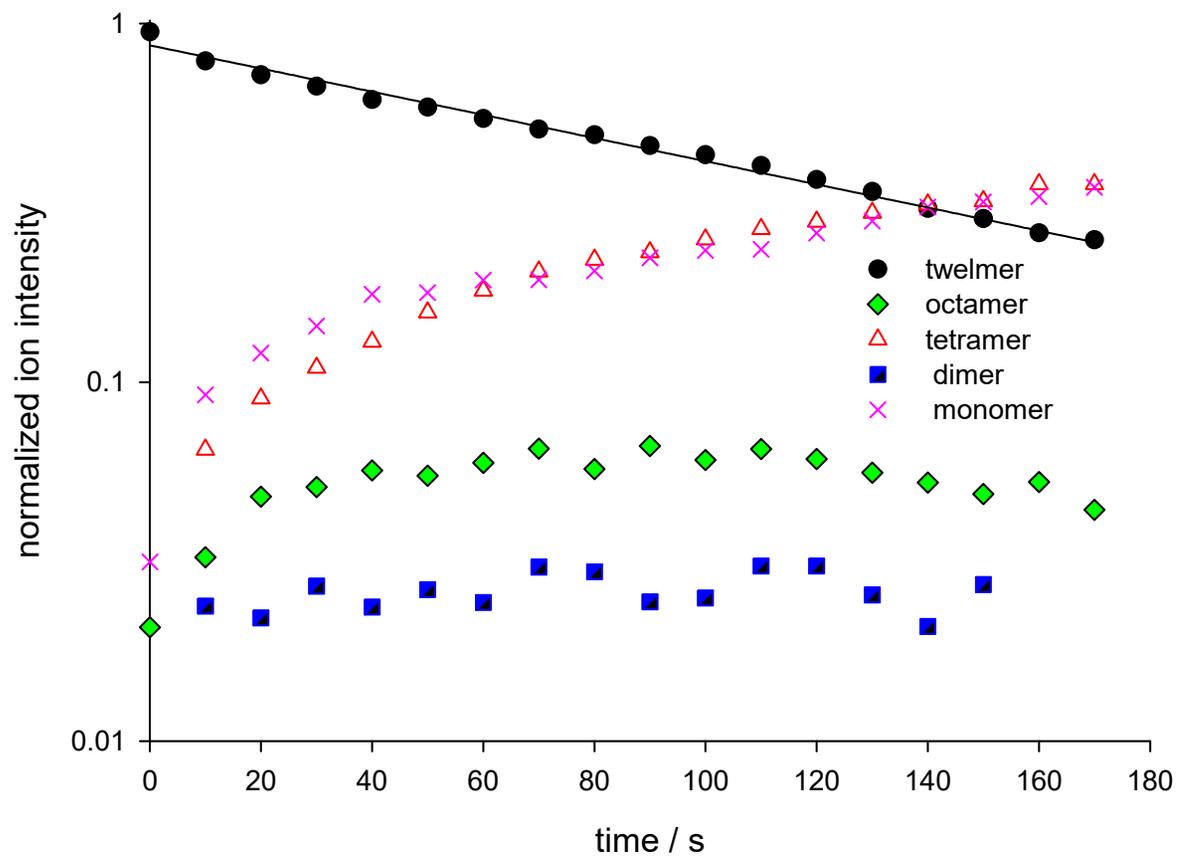


Figure S3. BIRD kinetics plot for  $K_2(9eG)_{12}^{2+}$  at 385 K.