The complexation between oppositely charged building-blocks in bulk and at surfaces is controlled by fine tuning the electrostatic interaction through the ionic strength ($I_\text{s}$). Dormant solutions where the interaction is completely switched off are generated. By fine tuning $I_\text{s}$ via dilution, the interaction is switched back on via a controlled dilution step triggering the formation of electrostatic complexes in the bulk and the growth of organic/inorganic functional layers at a surface.