Abiotic conditions in the cephalopod egg

In addition to the perivitelline pH (PVF\_pH) we determined total dissolved inorganic carbon (CT) from which CO\_2 partial pressures were calculated. Briefly, in addition to pH samples another 500 μl of PVF was sampled with a gas-tight glass syringe for the determination of total dissolved inorganic carbon (CT). CT was measured in triplicate (100 μl each) using a Corning 965 carbon dioxide analyzer (Olympic Analytical Service, Malvern, UK). The carbonate system speciation was calculated from CT and pH NBS scale (pH\_NBS) with the CO2SYS software (for details see the Material section of the main document).

The results demonstrate that environmental increases of pCO\_2 increase PVF pCO\_2 in an additive manner (Fig. S1 A).

**Figure S1** Abiotic conditions of the perivitelline fluid (PVF) along the time course of the CO\_2 perturbation experiment. Within few hours of high pCO\_2 exposure PVF pCO\_2 increases, leading to an additive effect of environmental hypercapnia on PVF pCO\_2 levels (A). Total dissolved inorganic carbon (CT) in the PVF along the incubation period of 120 h. Values are presented as mean± SEM (n=3).