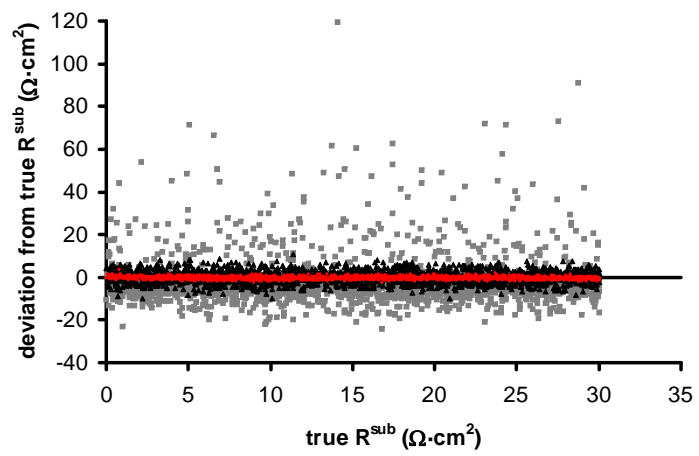
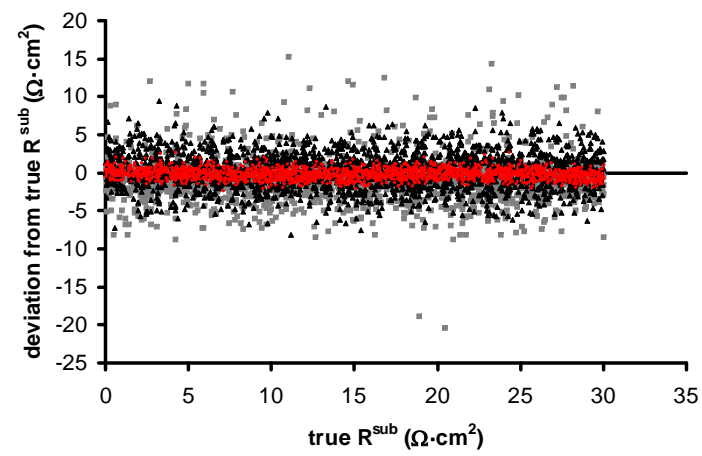


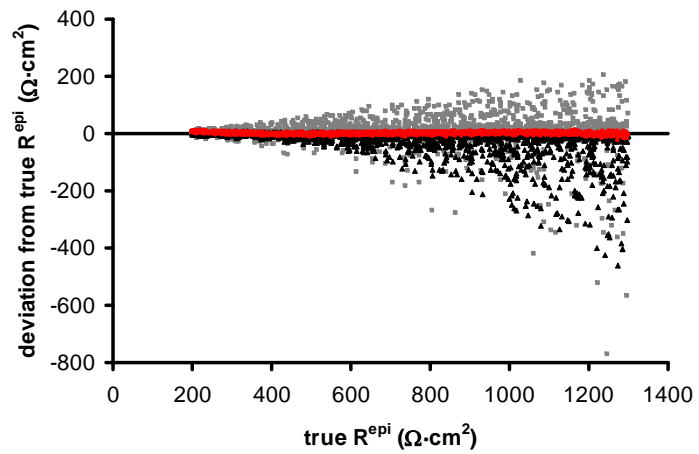
$ANN_{sub}^{HT}$



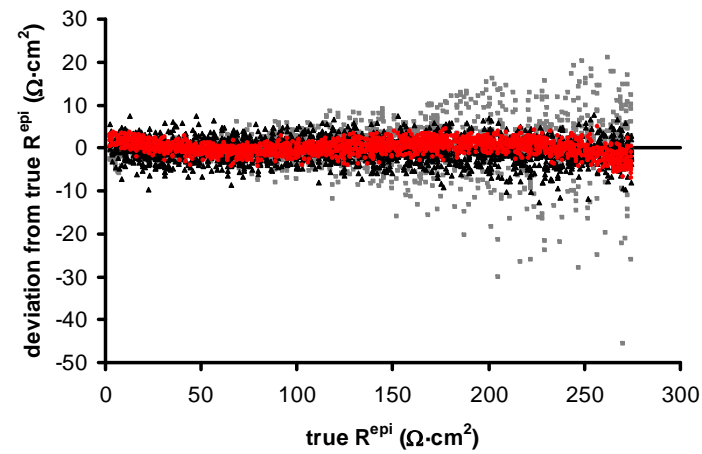
$ANN_{sub}^{HT+EGTA}$

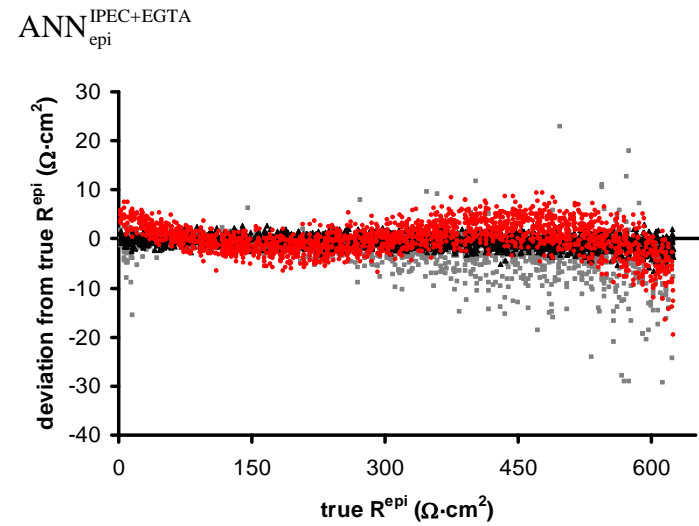
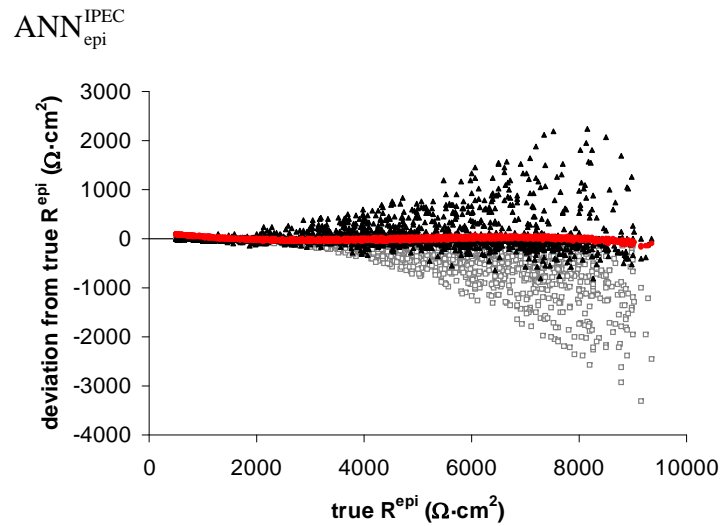
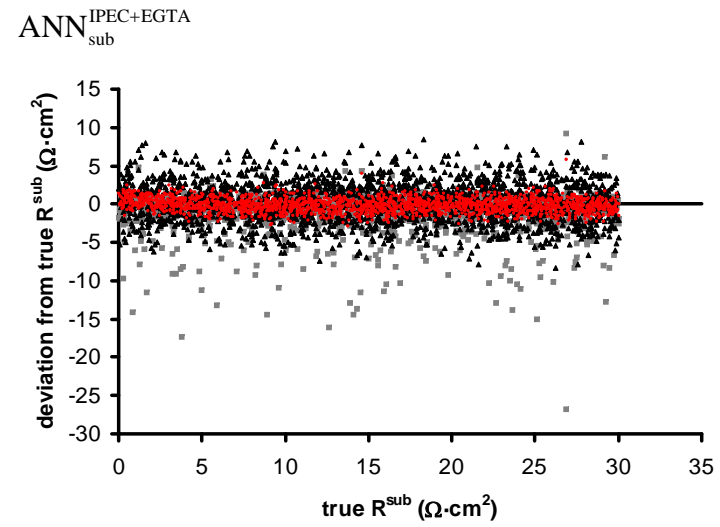
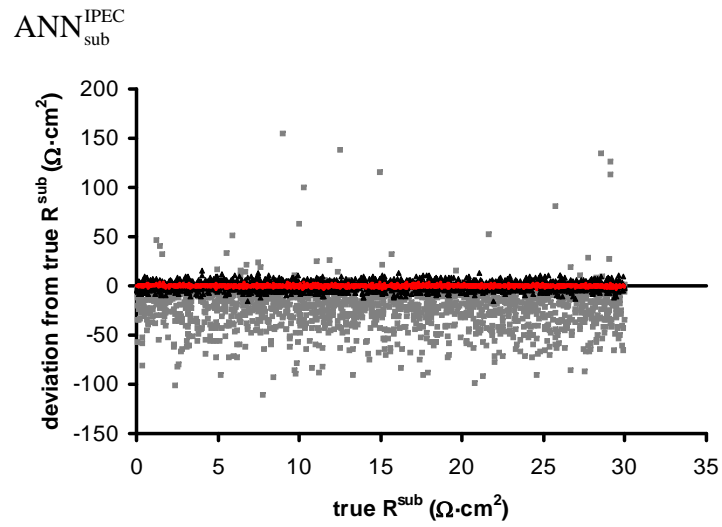


$ANN_{epi}^{HT}$



$ANN_{epi}^{HT+EGTA}$





**Fig. S5: Comparison of M1, M2 and ANN performance on modeled impedance spectra**

Deviations of estimated  $R^{epi}$  and  $R^{sub}$  values (estimated minus true value), using method M1 ( $\blacktriangle$ ), M2( $\blacksquare$ ) and the indicated ANN ( $\bullet$ ) are plotted against the respective true value. ANN perform better than M1 and M2 in all cases except ANN<sub>epi</sub><sup>IPEC+EGTA</sup>.