

Fig. S1: A schematic of the immobilization of the amine-activated pDNA via the thiol functionality of the 3-mercaptopropyltrimethoxysilane (MPS) insulation layer using sulfo-succinimidyl-4-(N-maleimidomethyl)cyclohexane-1-carboxylate (sulfo-SMCC) (Pierce) as the bifunctional linker: (a) reaction of the sulfo-SMCC with thiol at pH 6.5 and (b) reaction of the amine at the 5' of the pDNA with the NHS ester of the sulfo-SMCC at pH 8.0.

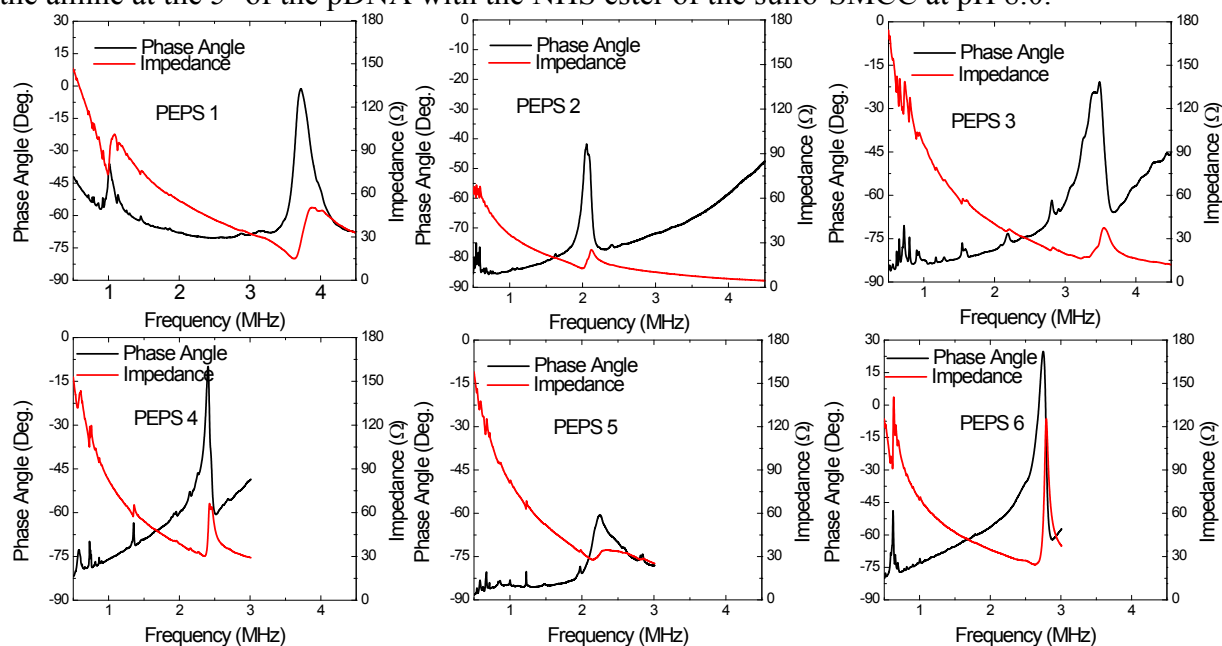


Fig. S2: Phase angle versus frequency resonance spectra of the 6 PEPS used in the array detection of the 6 codon-12 *K-Ras* mutations.