Supplementary Material (ESI) for PCCP

Supporting Material:

Mass spectrometry and beam deflection studies of tin-lead nanoalloy clusters

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Figures

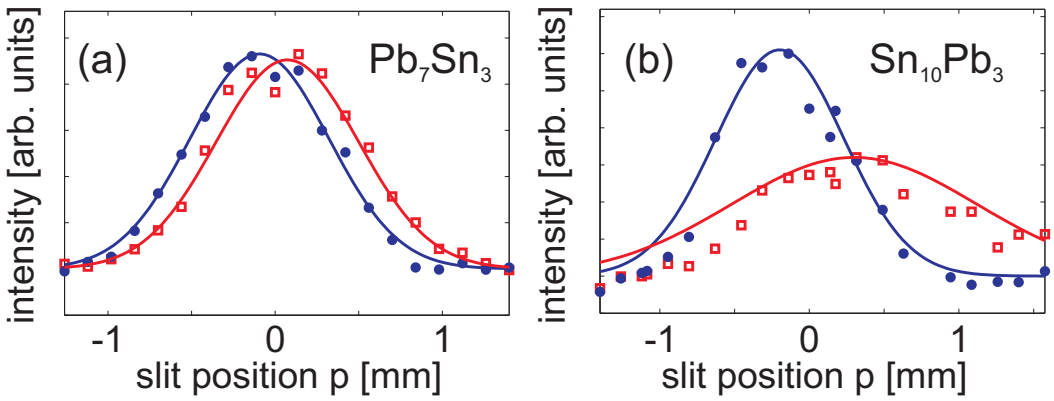

Fig. S 1: Comparison of the obtained beam profiles for rod 1 (a) and rod 2 (b) for a mass of about 1807 amu at 28 kV. The experimental data points without (with) deflection field are given by blue circles (red squares). The lines drawn through the data points are Gaussians. The two possible clusters are Pb_7Sn_3 (1806.1 amu) and $Sn_{10}Pb_3$ (1808.7 amu). Due to the remarkable differences of the molecular beam profiles the mass peak assignment was done as indicated above.

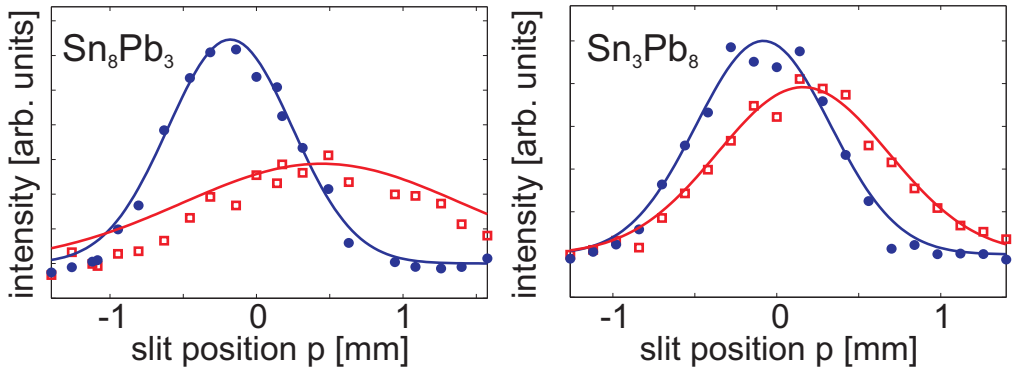

Fig. S 2: Molecular beam profiles of Sn_8Pb_3 and Sn_3Pb_8 at 28 kV deflection voltage highligthing the different dielectric response of tin and lead rich clusters. The experimental data points without (with) deflection field are given by blue circles (red squares). The lines drawn through the data points are Gaussians.

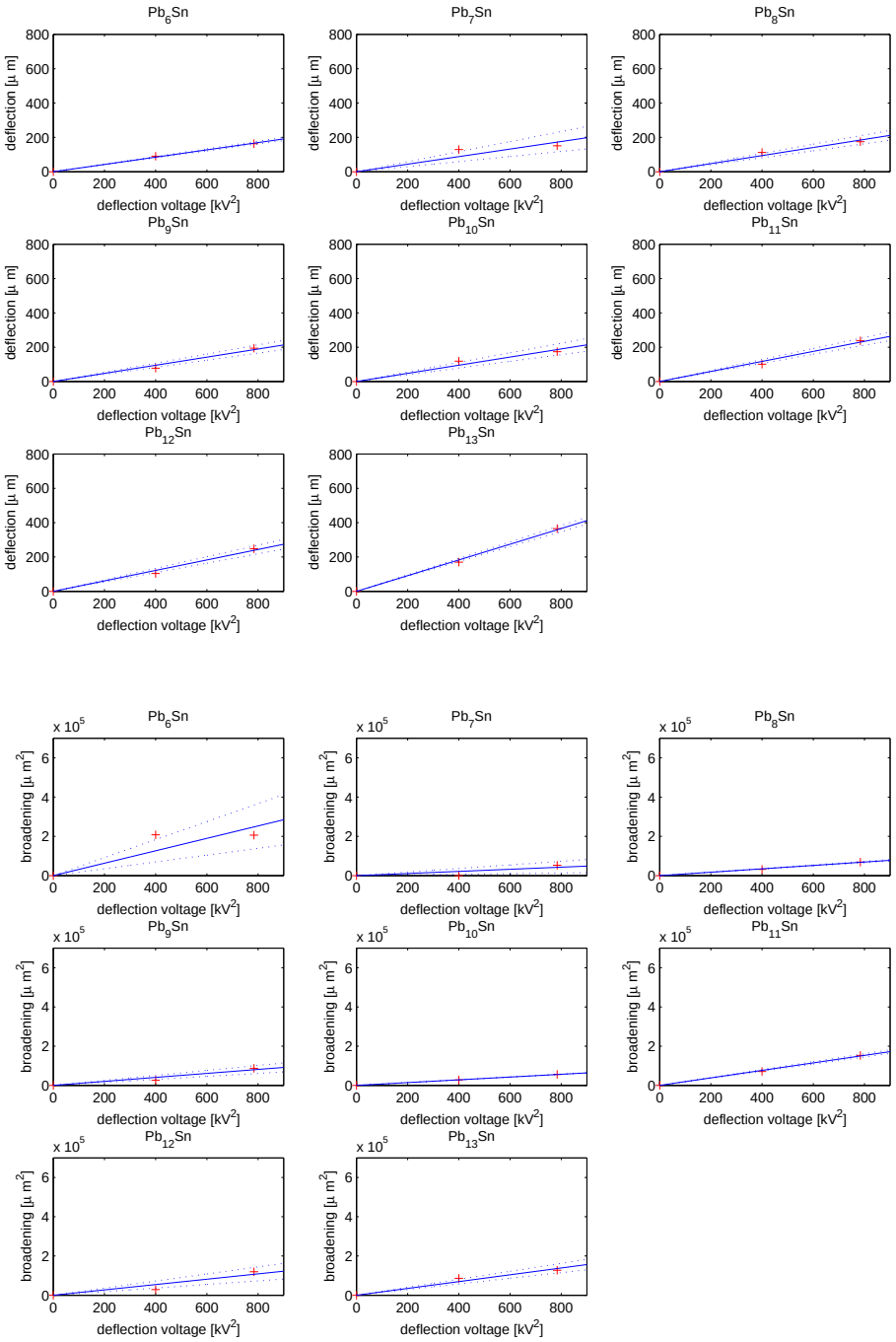

Fig. S 3: Deflection and squared broadening versus the squared deflection voltage in order to determine the polarizibility and the dipole moment by eq. 2 and eq. 3 for Pb_NSn at 50 K. The dotted lines indicate the experimental uncertainty.

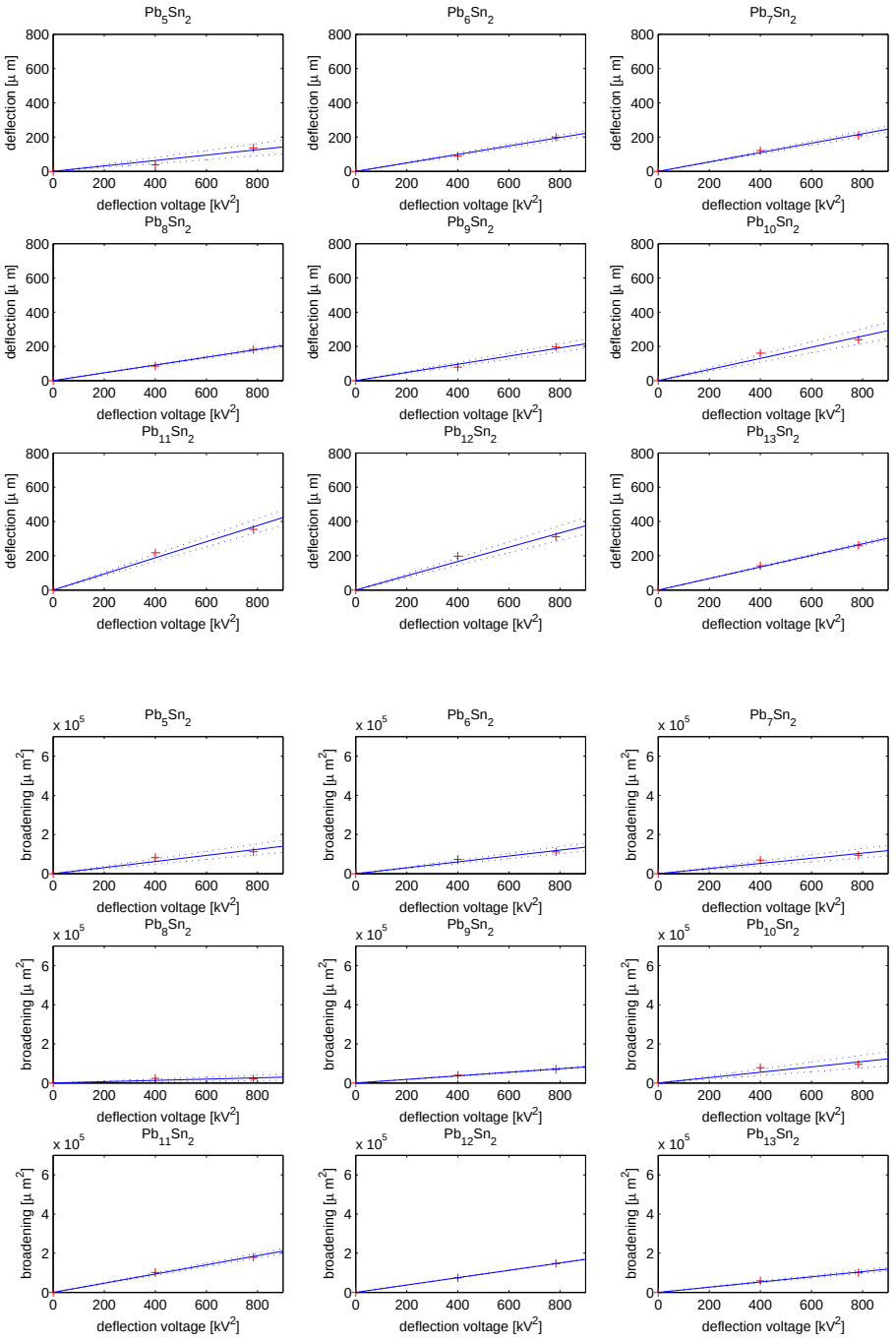

Fig. S 4: Deflection and squared broadening versus the squared deflection voltage in order to determine the polarizibility and the dipole moment by eq. 2 and eq. 3 for Pb_NSn_2 at 50 K. The dotted lines indicate the experimental uncertainty.

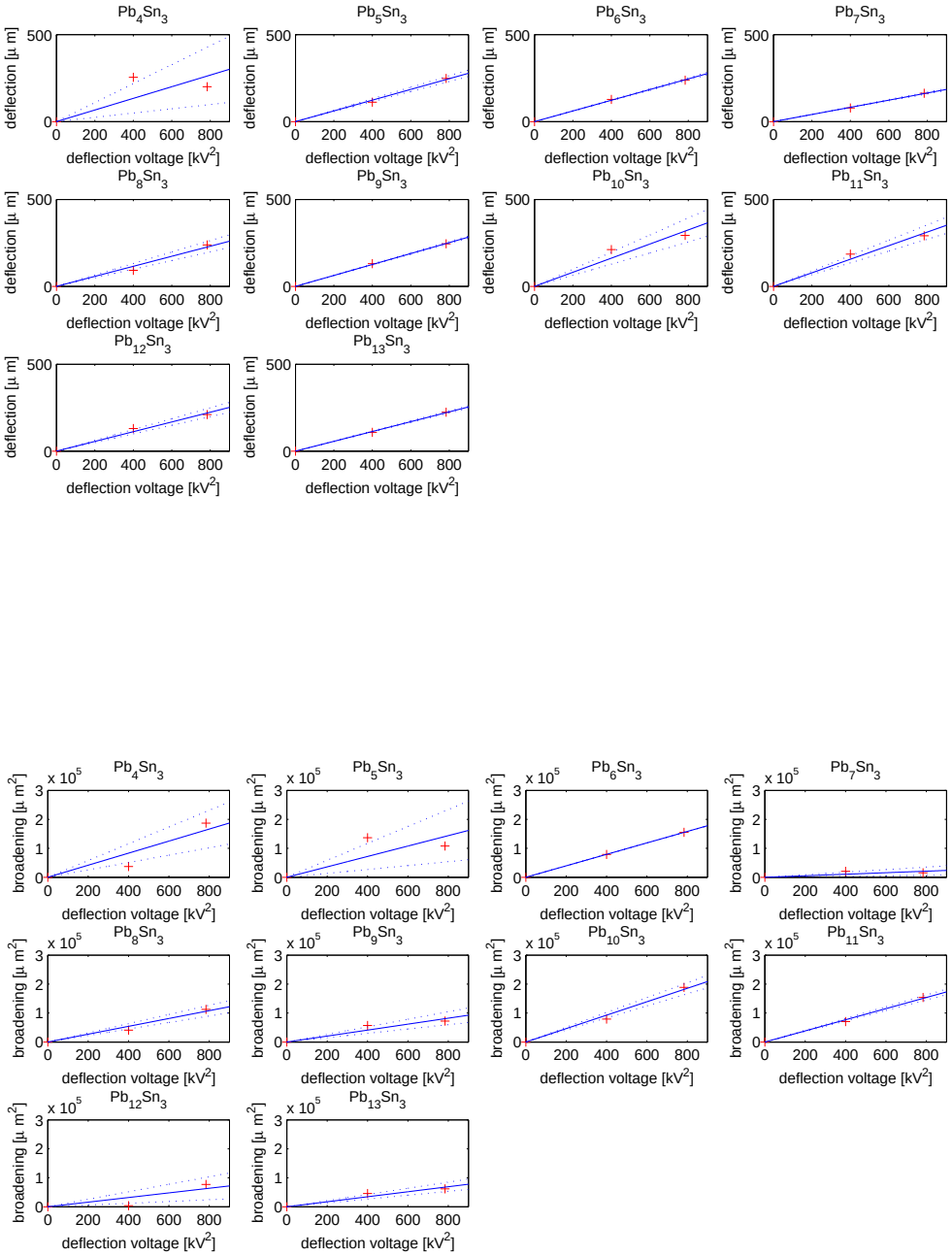

Fig. S 5: Deflection and squared broadening versus the squared deflection voltage in order to determine the polarizibility and the dipole moment by eq. 2 and eq. 3 for Pb_NSn_3 at 50 K. The dotted lines indicate the experimental uncertainty.

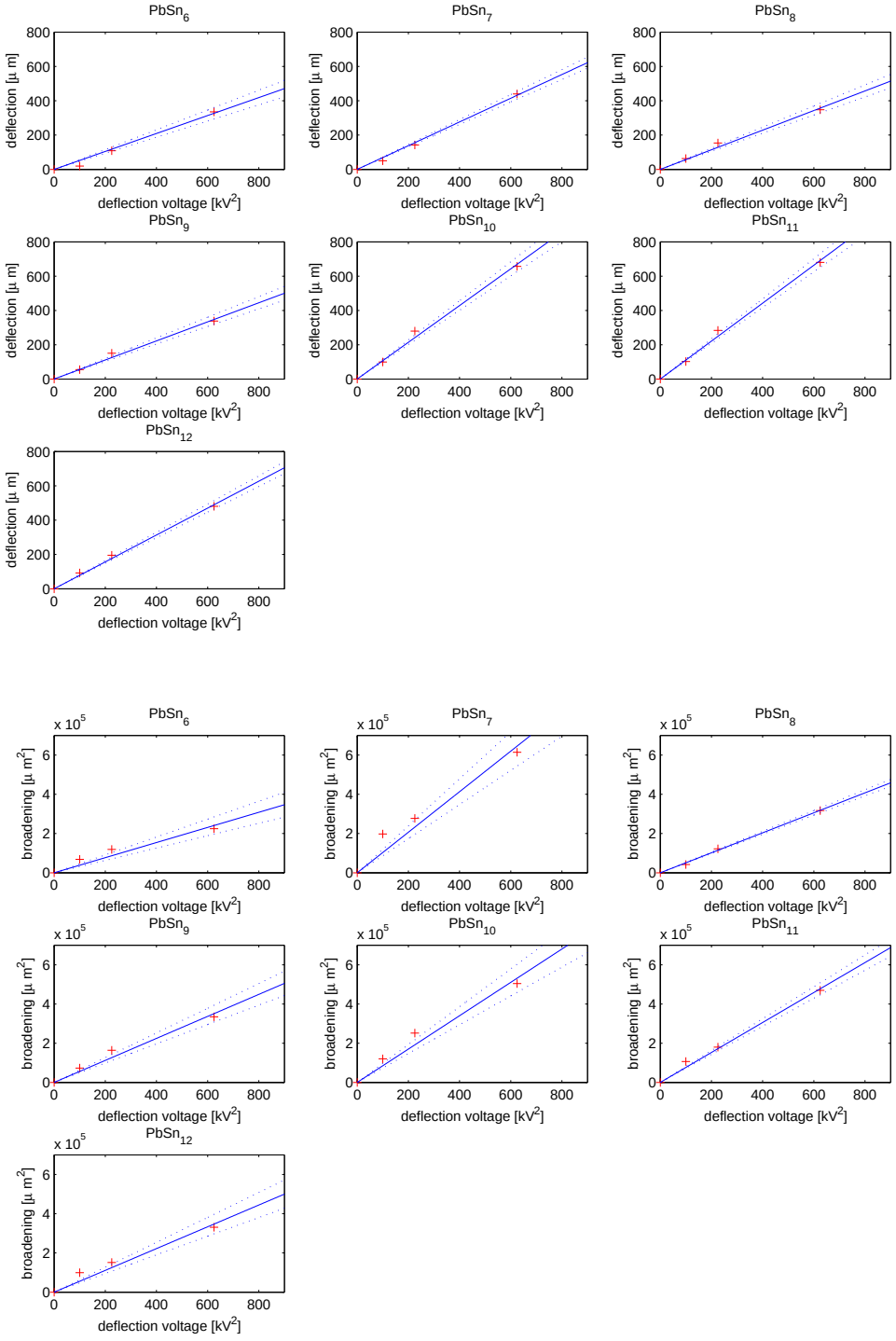

Fig. S 6: Deflection and squared broadening versus the squared deflection voltage in order to determine the polarizibility and the dipole moment by eq. 2 and eq. 3 for $PbSn_M$ at 50 K. The dotted lines indicate the experimental uncertainty.

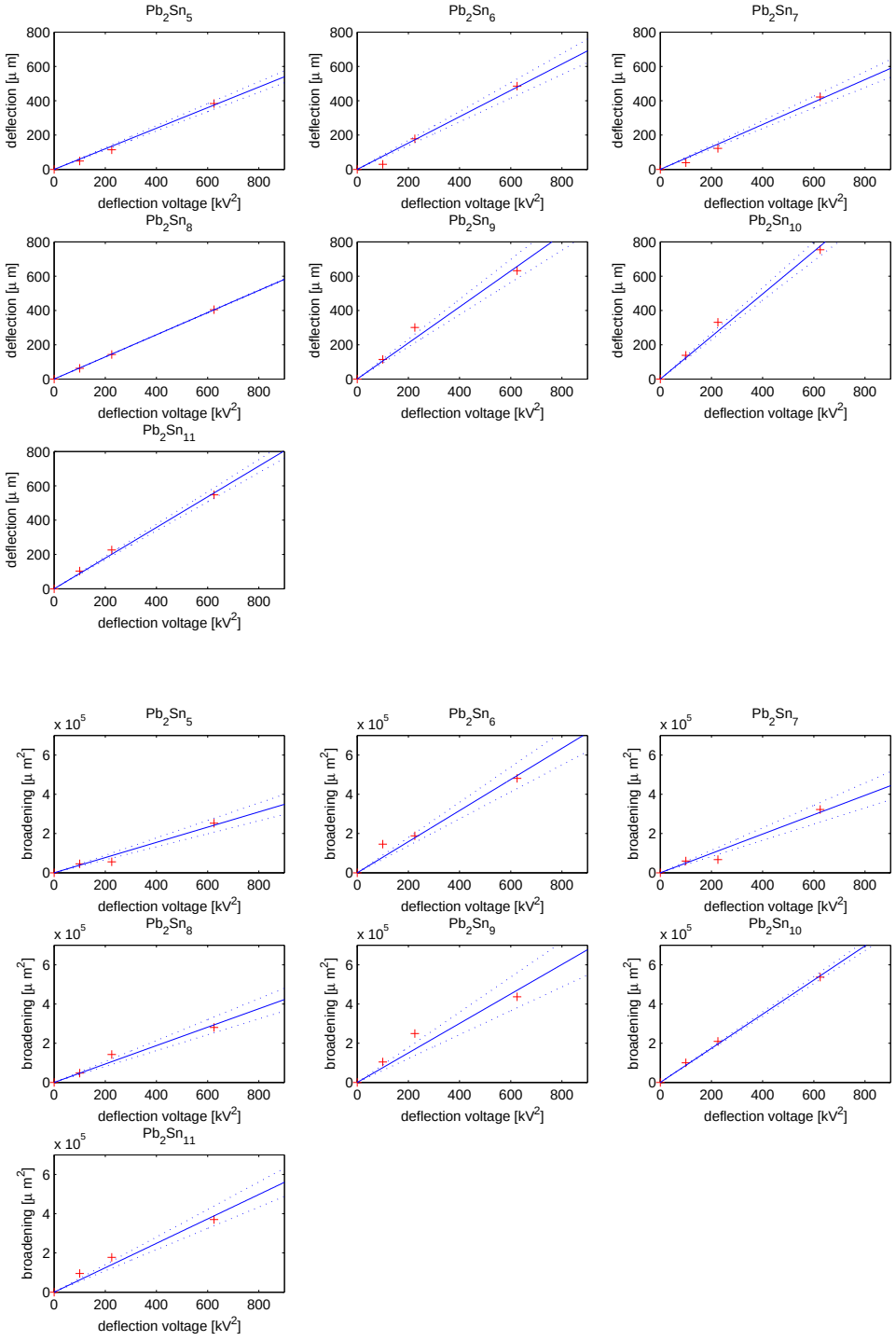

Fig. S 7: Deflection and squared broadening versus the squared deflection voltage in order to determine the polarizibility and the dipole moment by eq. 2 and eq. 3 for Pb_2Sn_M at 50 K. The dotted lines indicate the experimental uncertainty.

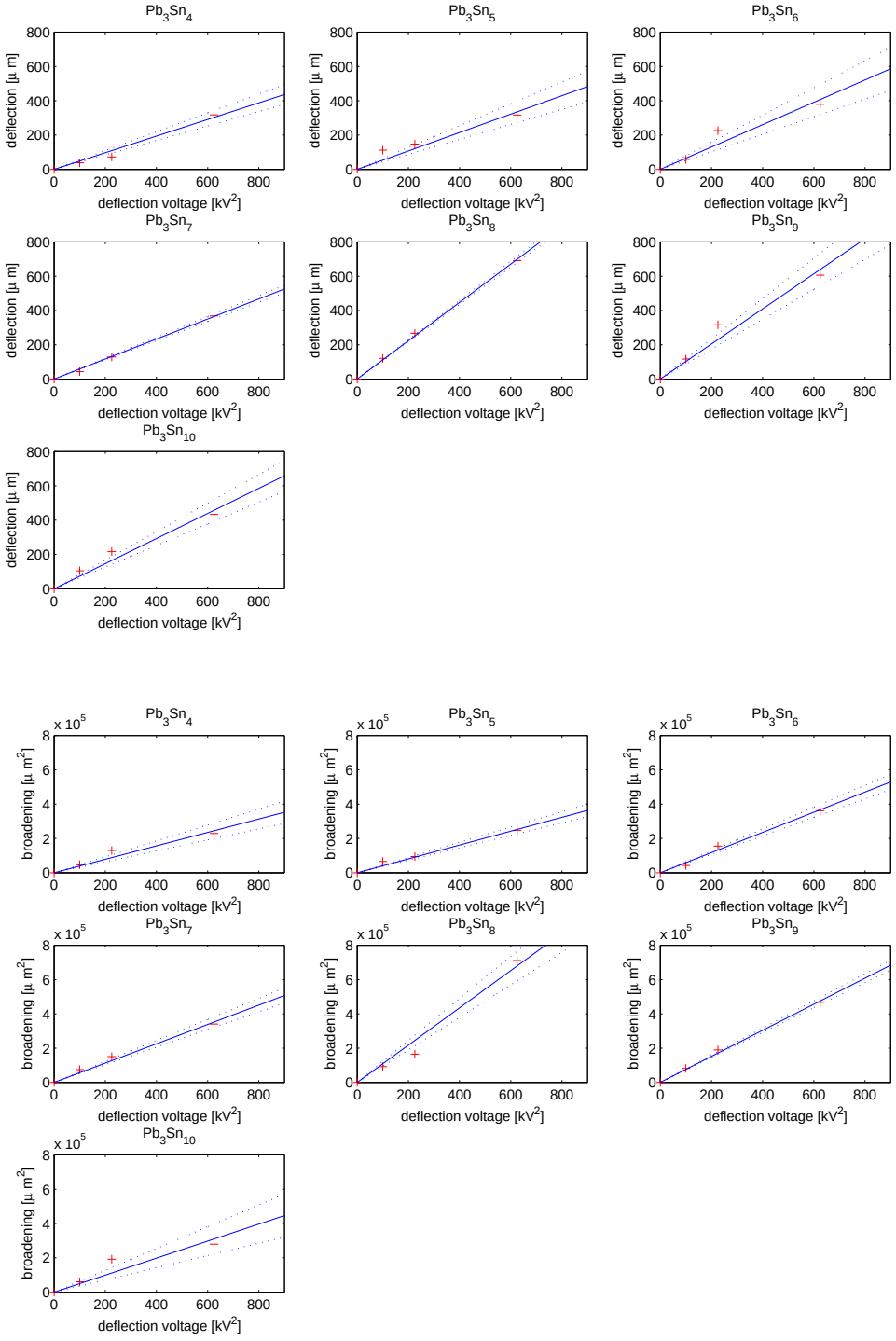

Fig. S 8: Deflection and squared broadening versus the squared deflection voltage in order to determine the polarizibility and the dipole moment by eq. 2 and eq. 3 for Pb_3Sn_M at 50 K. The dotted lines indicate the experimental uncertainty.