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Supporting information for article:

Evaluation of grain-average stress tensor in a tensile-deformed Al–Mn polycrystal by high-energy X-ray diffraction

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Figure S1. Equivalent grain structure of the polycrystal reconstructed from 3DXRD data at different values of the applied strain ϵ_a . Grains are represented by equivalent spheres of the same volume as the real grains. The spheres are centred at the centre of mass of the grains and coloured according to the components of the Rodrigues vectors.

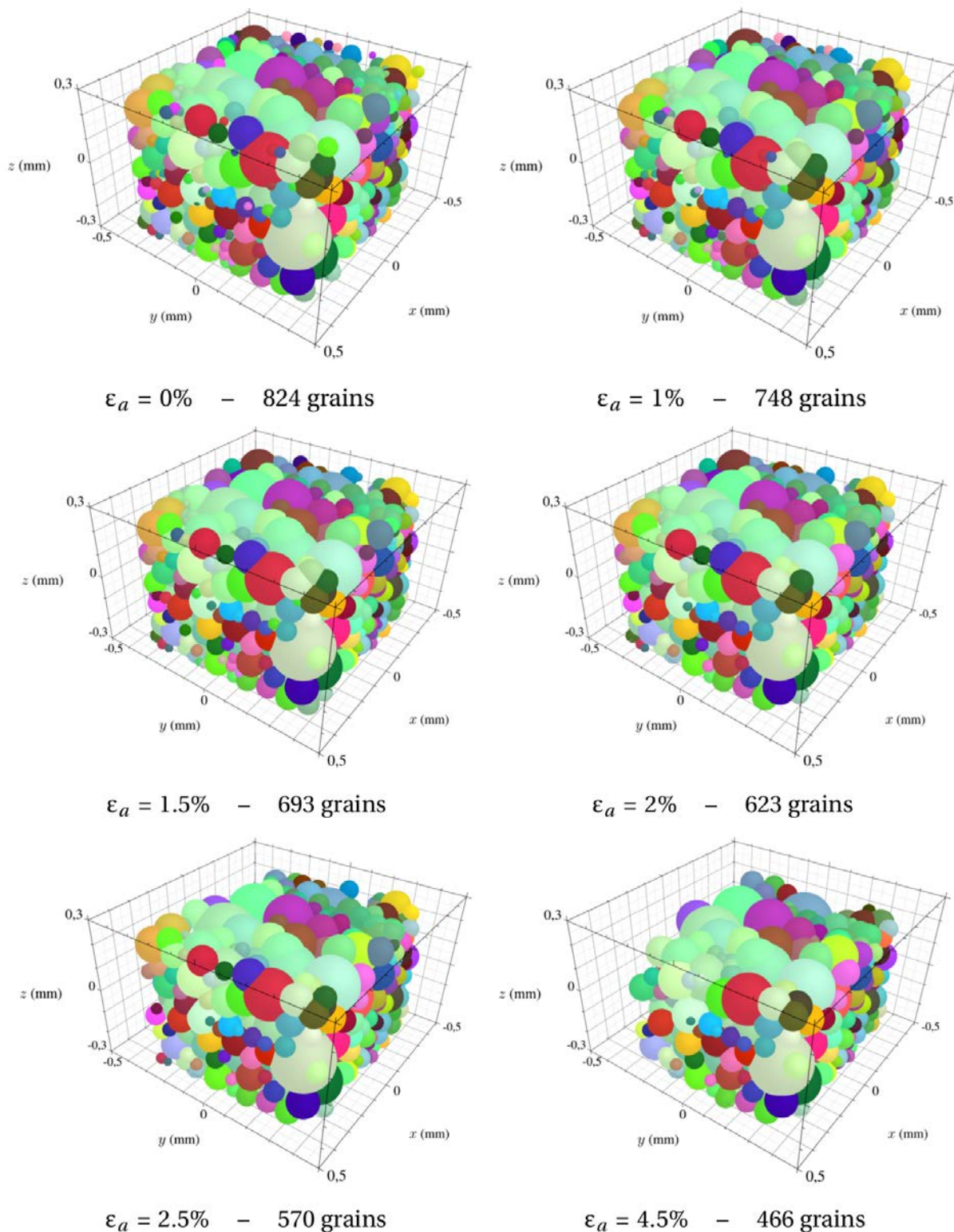


Figure S2. Probability density of the strain tensor components at different values of the applied strain ε_a .

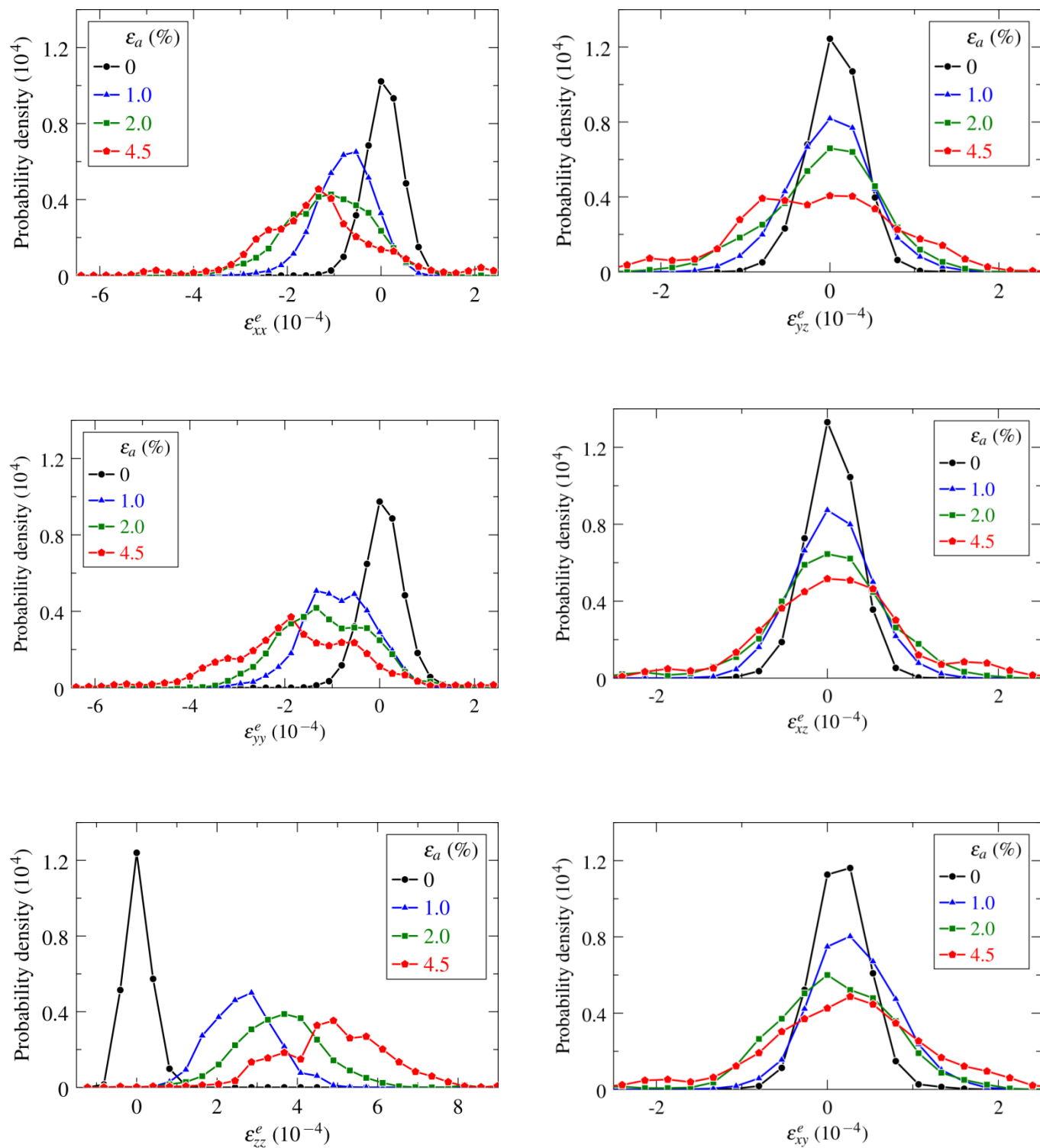


Figure S3. Probability density of the stress tensor components at different values of the applied strain ε_a .

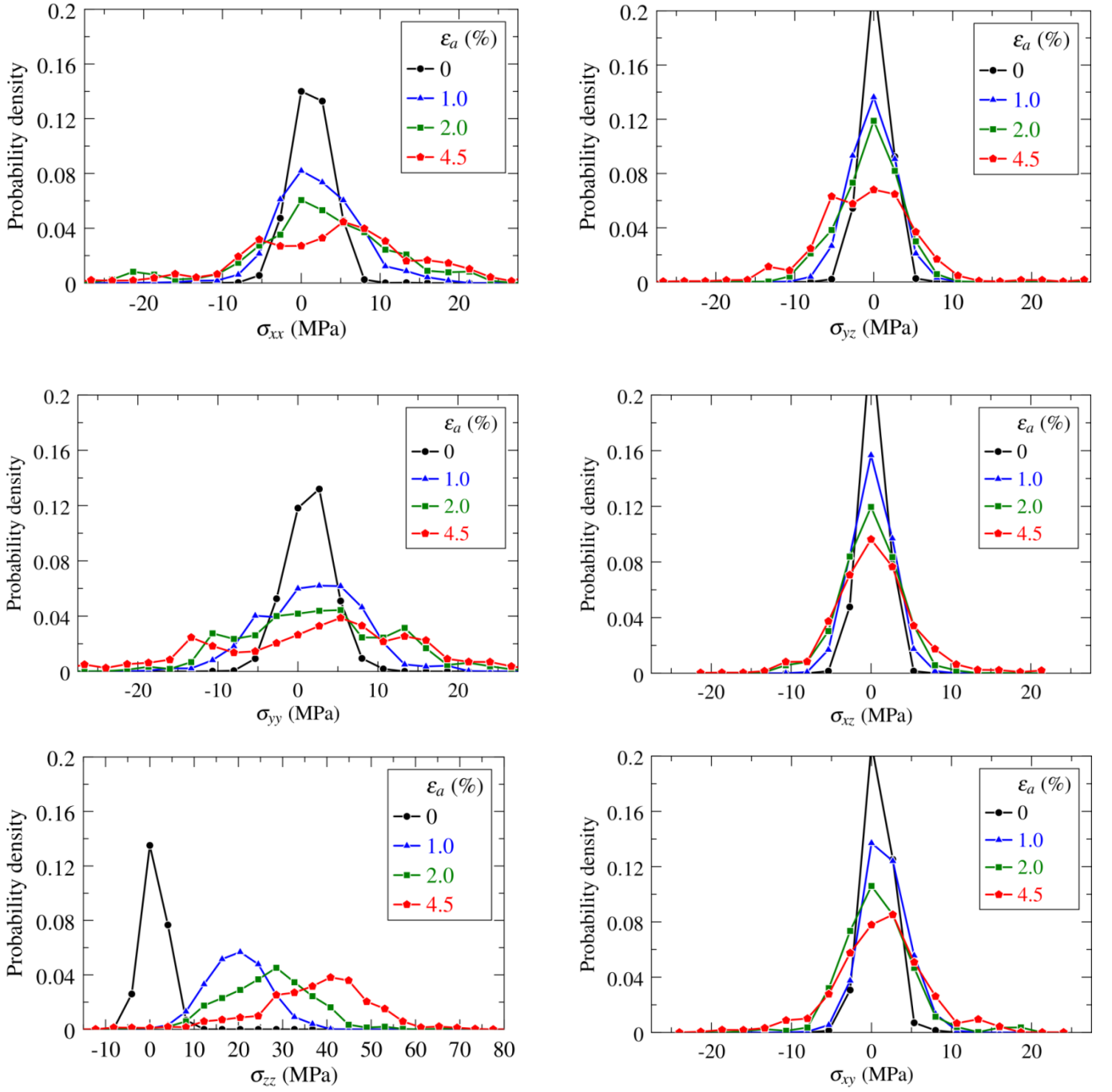


Table S1. Mean values of the stress tensor components in the non-deformed state and the standard deviation of their distributions (STD).

Stress component	σ_{xx} [MPa]	σ_{yy} [MPa]	σ_{zz} [MPa]	σ_{yz} [MPa]	σ_{xz} [MPa]	σ_{xy} [MPa]
Mean value	1.2(22)	1.4(26)	0.8(20)	0.4(16)	0.2(9)	0.7(12)
STD	3.3	3.4	2.3	1.3	1.3	1.6