

Supporting Materials of

“Evolution of Dealloying Induced Strain in Nanoporous Gold Crystals”

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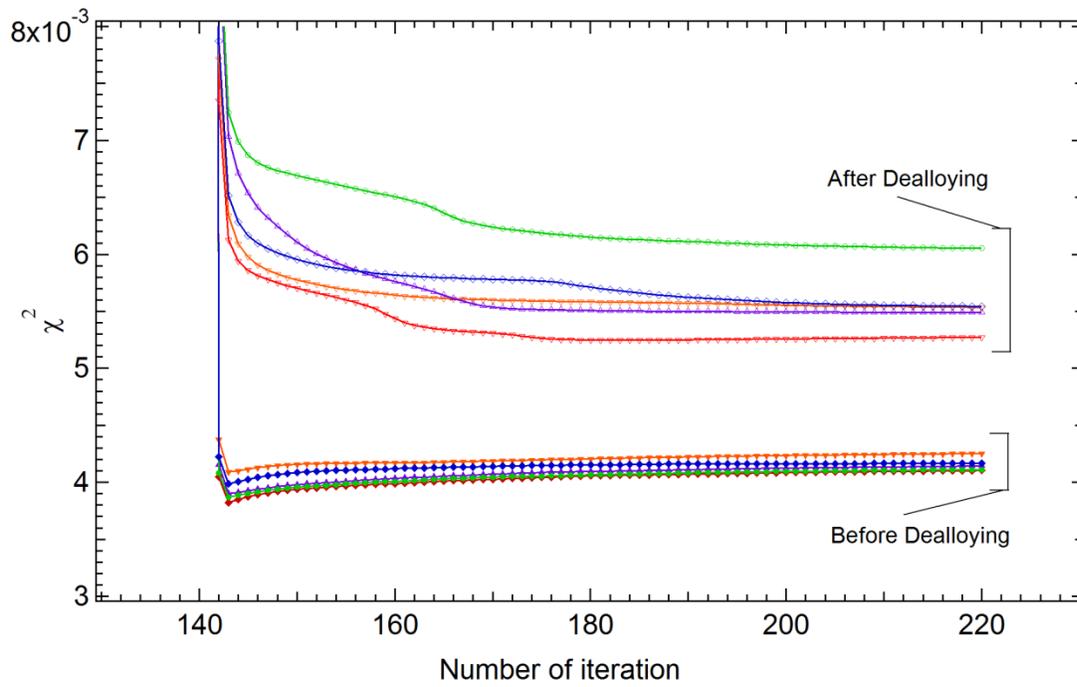
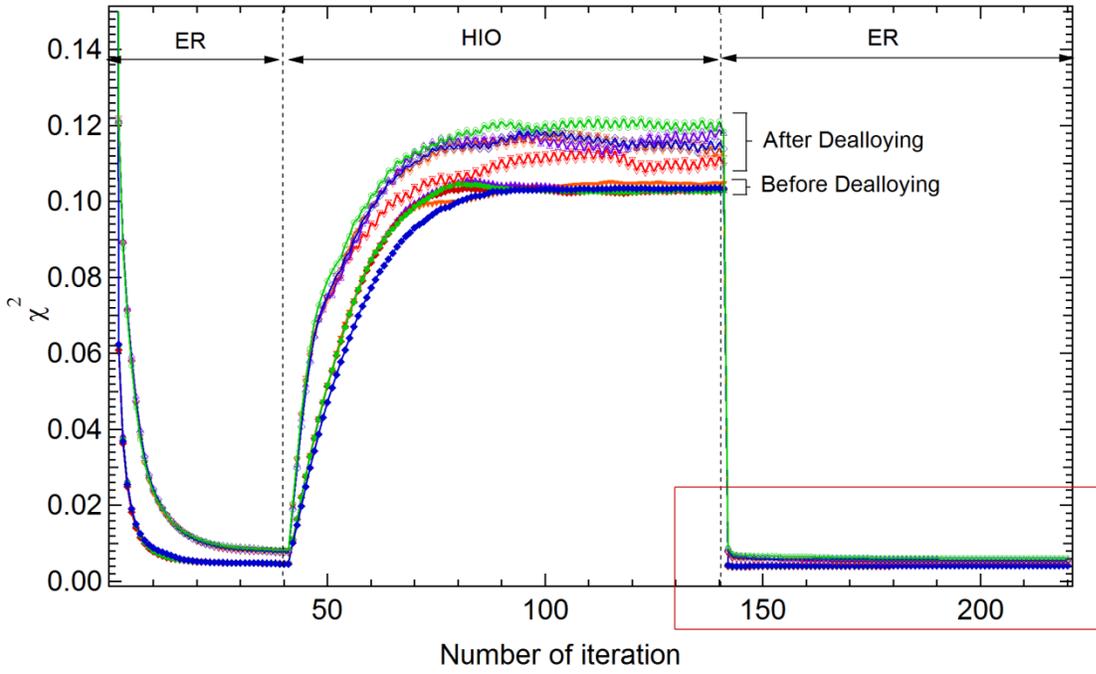
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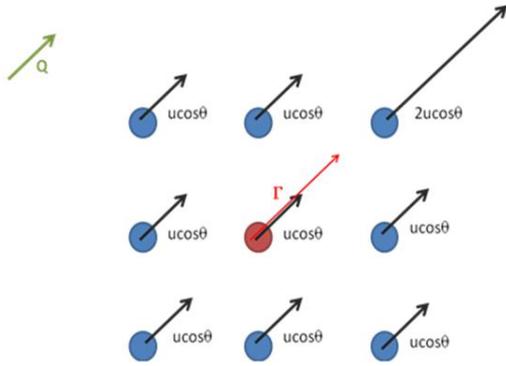


Supporting Material 1. χ^2 vs. number of iterations

$$\phi = \mathbf{Q} \cdot \mathbf{u}, \phi > 0, \mathbf{u} \cos \theta > 0$$

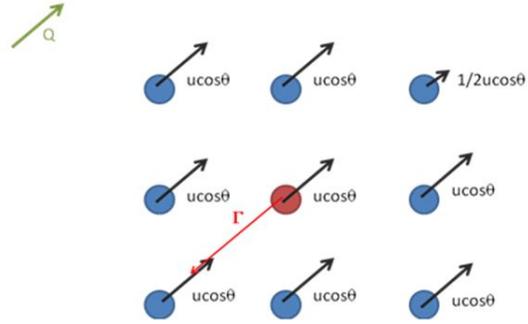
Case Ia: $\Gamma \cdot \mathbf{Q} > 0$ (for the red ball)

→ tensile



Case Ib: $\Gamma \cdot \mathbf{Q} < 0$ (for the red ball)

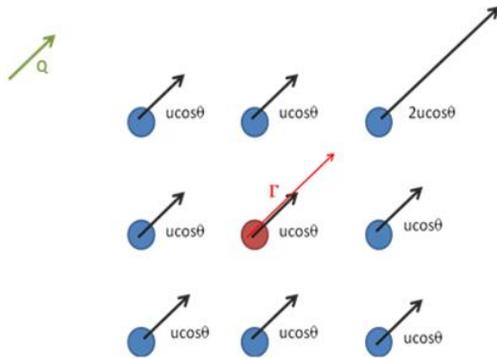
→ compressive



$$\phi = \mathbf{Q} \cdot \mathbf{u}, \phi < 0, \mathbf{u} \cos \theta < 0$$

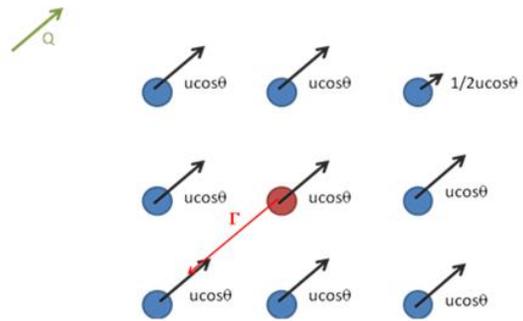
Case IIa: $\Gamma \cdot \mathbf{Q} > 0$ (for the red ball)

→ tensile



Case IIb: $\Gamma \cdot \mathbf{Q} < 0$ (for the red ball)

→ compressive



Supporting Material 2. Illustration of the relationship between the directions of \mathbf{Q} , Γ , and strain in four different cases. Here, \mathbf{Q} is the momentum transfer, \mathbf{u} is the lattice displacement field and Γ is the gradient of $\mathbf{u} \cos \theta$. ϕ is the phase and θ is the angle between \mathbf{Q} and \mathbf{u} .