

DISCUSSION

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1. Did you strain the foils and observe what happens to the He bubbles?
2. Did you correlate any mechanical properties of the α injected Al and Al-Al₂O₃ foils with He bubbles?

E. Ruedl (author's closure)

1. We have strained the α bombarded Al and Al-Al₂O₃ foils within the microscope at 20 C by means of a microtensile straining device. As a result of the deformation, the small bubbles showed a tendency to line up in rows in the direction of the maximum applied stress. Some of the larger bubbles contained in the rows exhibited contrast effects due to a surrounding strain field. Such contrast effects were not observed in the as-bombarded foils. A possible interpretation of the strain field observed around some of the bubbles after deformation would be that these bubbles were formed by coalescence of smaller bubbles. Since the deformation experiments were performed at 20 C, the bubbles formed by coalescence would not be able to readjust their radius R by $R^2 = r_1^2 + r_2^2$ to come again in an approximate equilibrium with the He pressure. We intend to study the described phenomena in greater detail.

2. Up to now we have not made a study to correlate the mechanical properties of the α bombarded foils and the He bubbles present in these foils.

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