Table 1 Composition of the initial high-purity precursors used to synthesize ODS FeNiCrY2O3 alloy

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| --- | --- | --- | --- | --- | --- | --- |
| Powder | Purity | Crystal Structure (at 25°C) | Particle Size (μm) | Density (g.cm-3) | Melting point (°C) | Source |
| Fe | 98% | *bcc* | 44.00 | 7.80 | 1535 | Alfa Aesar, US |
| Cr | >99% | *bcc* | 44.00 | 7.14 | 1435 | Alfa Aesar, US |
| Ni | 99.8% | *fcc* | 45.00 | 8.90 | 1907 | Sigma-Aldrich, US |
| Y2O3 | 99.99% | *cubic* | 0.05 | 5.01 | 2410 | Sigma-Aldrich, US |