

# Ni-Cu Nanoparticles and Their Feasibility for Magnetic Hyperthermia

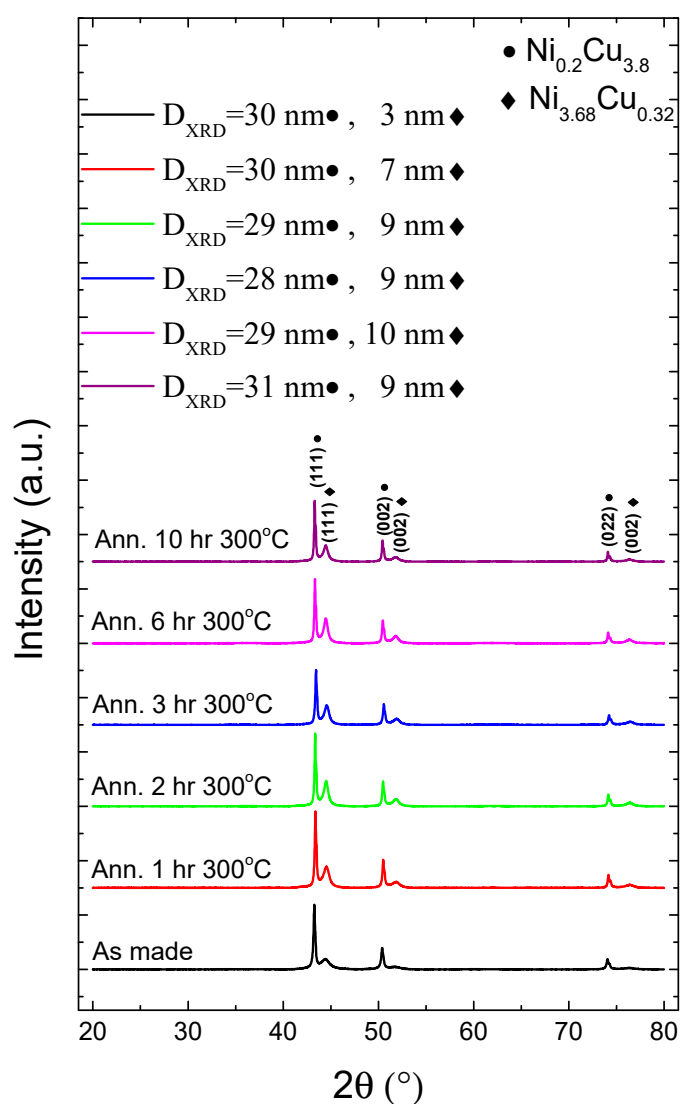
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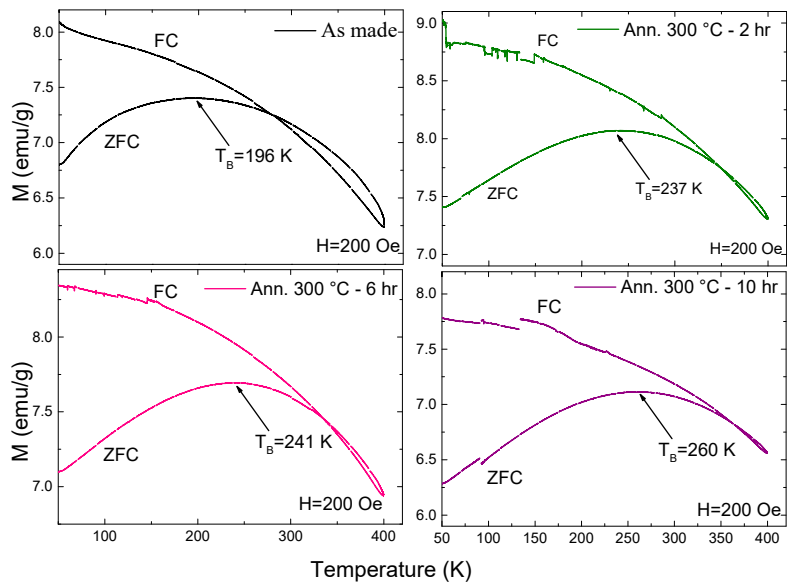
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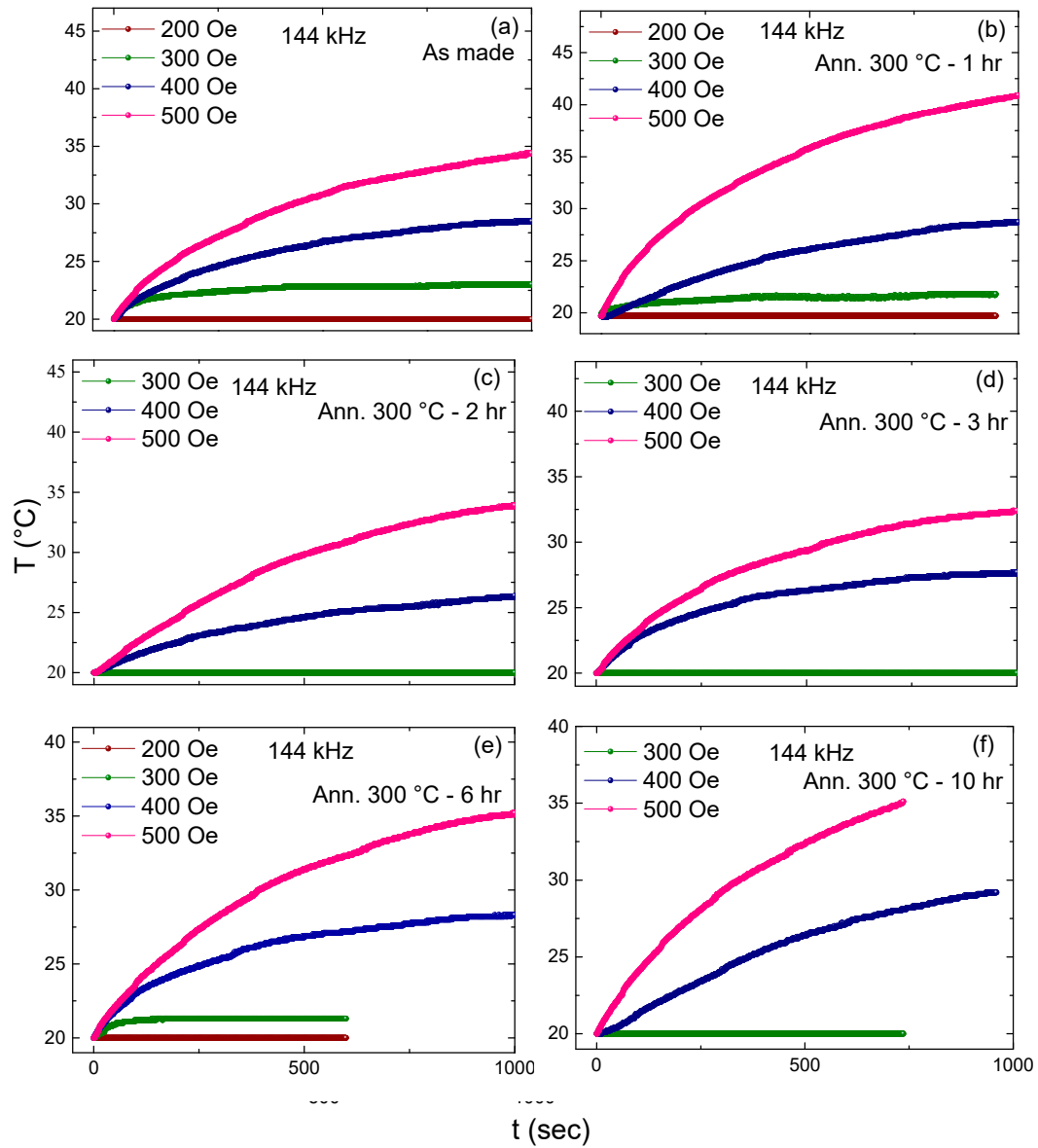
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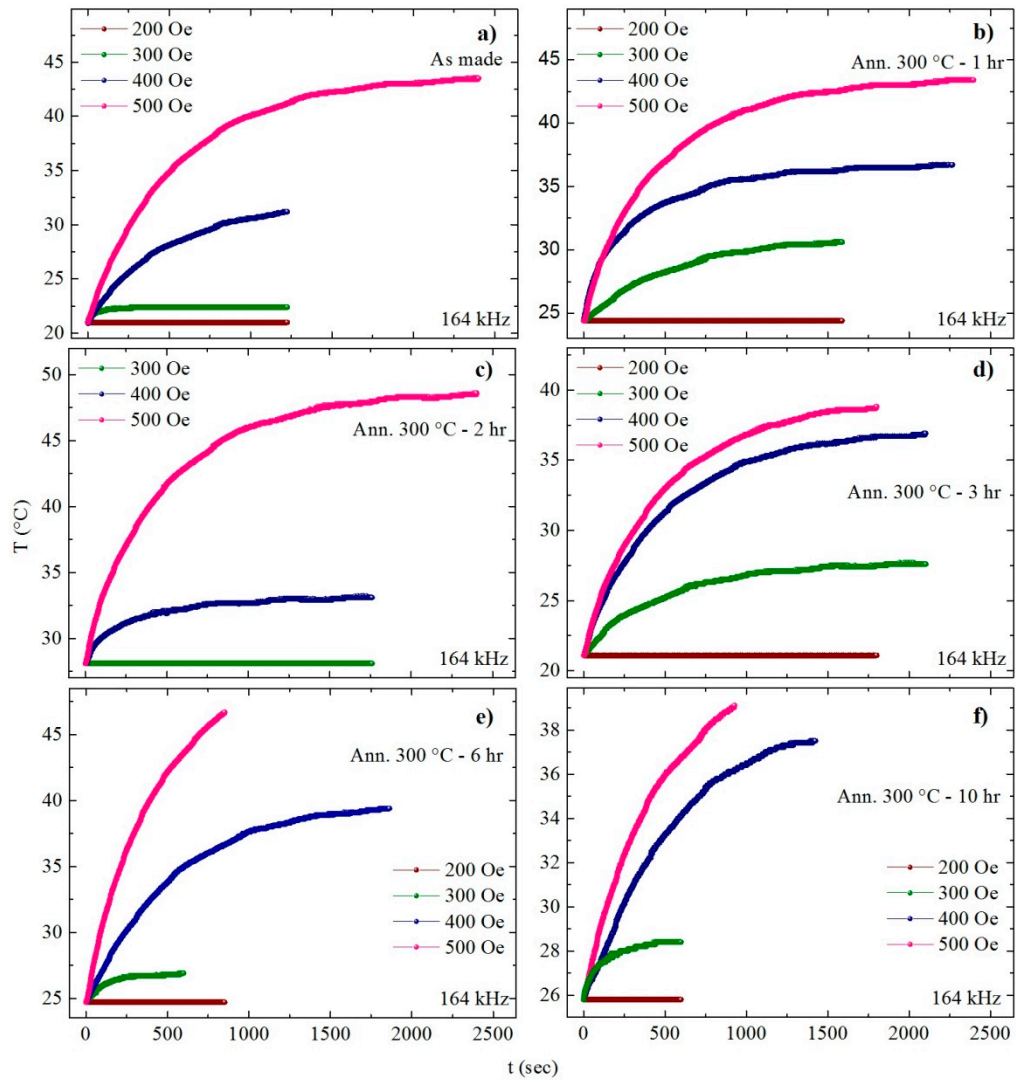
**Figure S1.** XRD pattern and crystallite size of Ni-Cu nanoclusters for as made and annealed at 300 °C for 1 hr, 2 hr, 3 hr, 6 hr, and 10 hr.



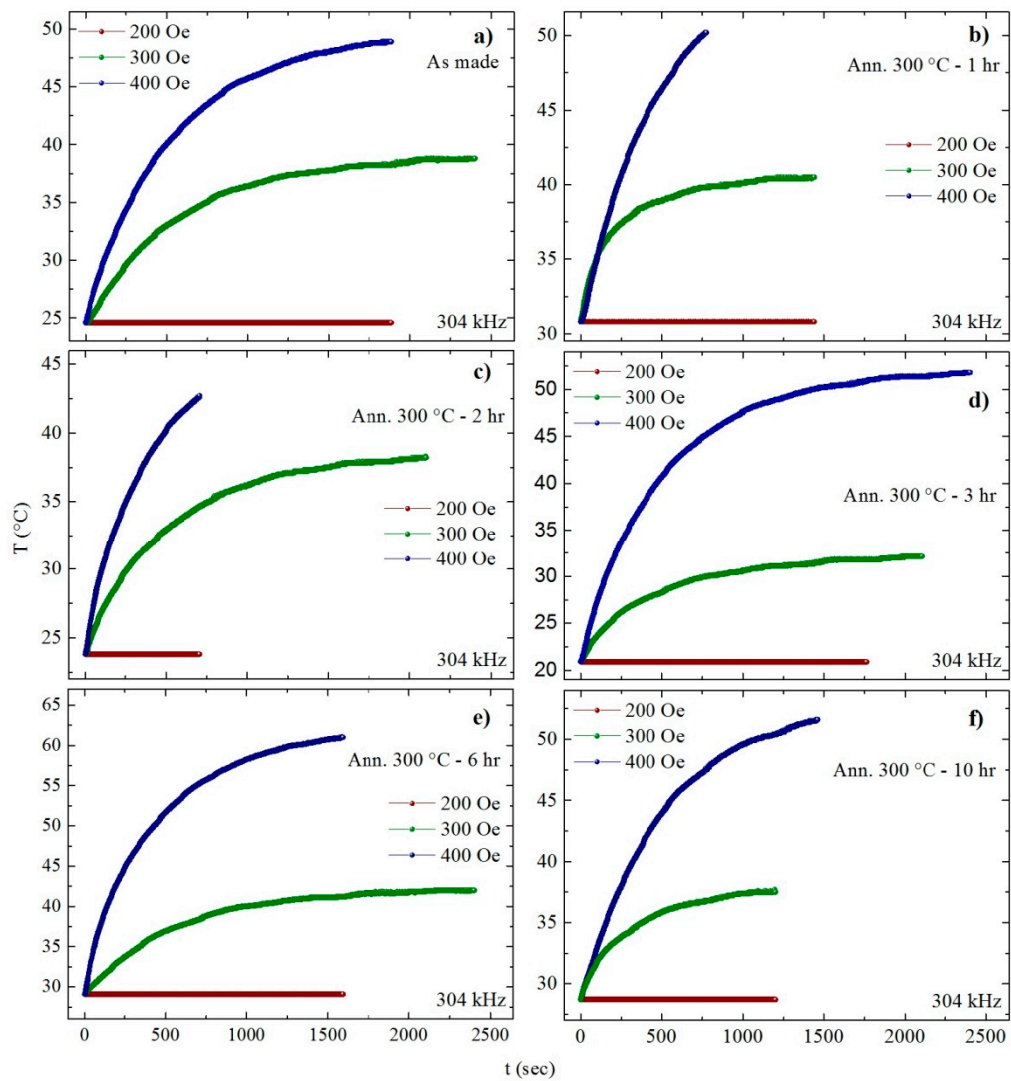
**Figure S2.** Magnetization dependence on temperature ( $M \times T$ ) at  $H=200$  Oe for as made and annealed Ni-Cu nanoclusters at  $300^\circ\text{C}$  for 1, 2, 6, 10 hr.



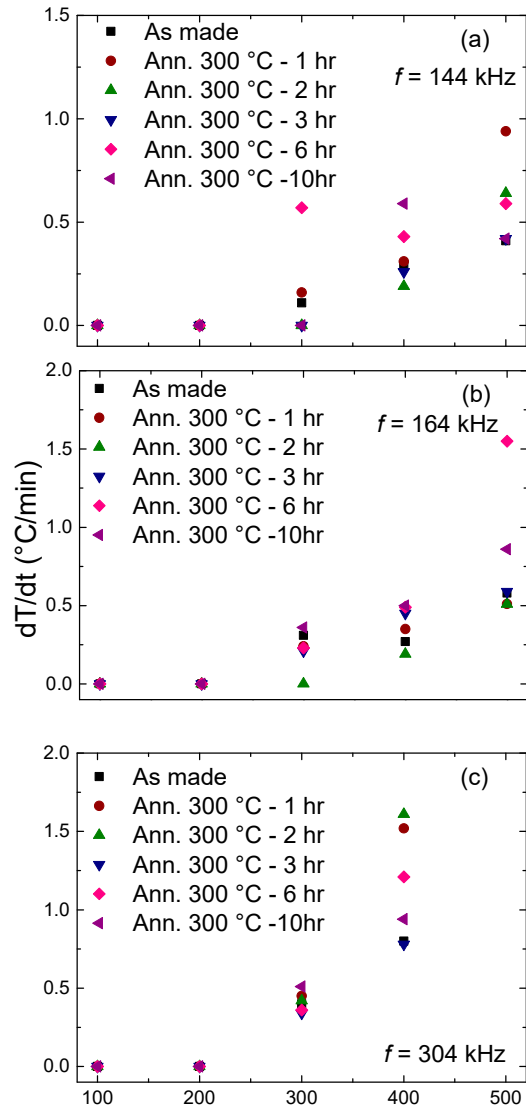
**Figure S3.** Temperature vs Time at different AC magnetic fields at 144 kHz for samples (a) as made, annealed at 300 °C for b) 1, c) 2, d) 3, e) 6, and f) 10 hr.



**Figure S4.** Temperature vs Time at different AC magnetic fields at 164 kHz for samples (a) as made, annealed at 300 °C for b) 1, c) 2, d) 3, e) 6, and f) 10 hr.



**Figure S5.** Temperature vs Time at different AC magnetic fields at 304 kHz for samples (a) as made, annealed at 300  $^{\circ}\text{C}$  for b) 1, c) 2, d) 3, e) 6, and f) 10 hr.



**Figure S6.** Change in heating rate dependence on applied AC magnetic fields  $H$  of Ni-Cu nanoclusters for as made and annealed samples at 300  $^{\circ}\text{C}$ . at different frequencies  $f$  for (a) 144 kHz, (b) 164 kHz, and (c) 304 kHz.