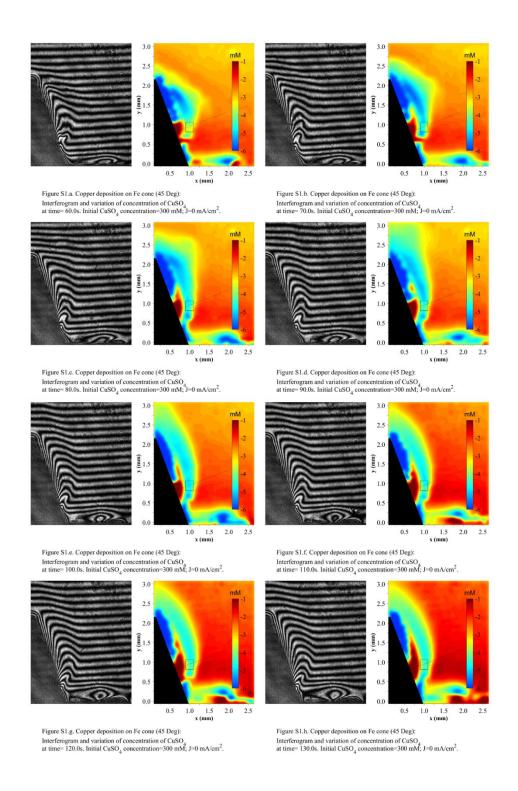
## **Supporting information**

## "Oscillatory copper deposition on conical iron electrodes in nonuniform magnetic fields"

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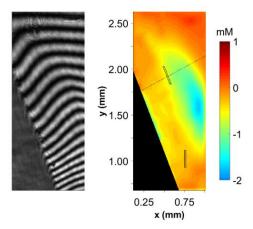


Figure S2.a. Copper electrodeposition on Fe cone (45 Deg): Interferogram and variation of concentration of  ${\rm CuSO_4}$  at time= 38.0s. Initial  ${\rm CuSO_4}$  concentration=300 mM; J=4.0 mA/cm².

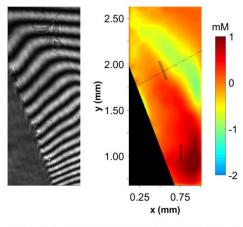


Figure S2.b. Copper electrodeposition on Fe cone (45 Deg): Interferogram and variation of concentration of CuSO<sub>4</sub> at time= 40.0s. Initial CuSO<sub>4</sub> concentration=300 mM; J=4.0 mA/cm<sup>2</sup>.

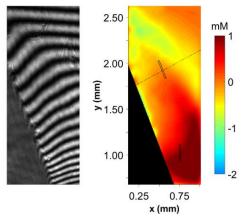


Figure S2.c. Copper electrodeposition on Fe cone (45 Deg): Interferogram and variation of concentration of  $CuSO_4$  at time= 41.0s. Initial  $CuSO_4$  concentration=300 mM; J=4.0 mA/cm<sup>2</sup>.

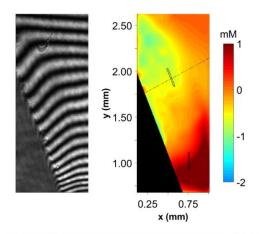


Figure S2.d. Copper electrodeposition on Fe cone (45 Deg): Interferogram and variation of concentration of CuSO<sub>4</sub> at time= 42.0s. Initial CuSO<sub>4</sub> concentration=300 mM; J=4.0 mA/cm<sup>2</sup>.

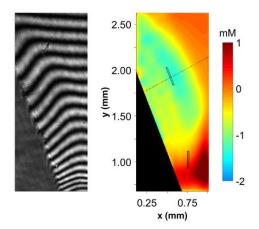


Figure S2.e. Copper electrodeposition on Fe cone (45 Deg): Interferogram and variation of concentration of  $CuSO_4$  at time= 43.0s. Initial  $CuSO_4$  concentration=300 mM; J=4.0 mA/cm<sup>2</sup>.

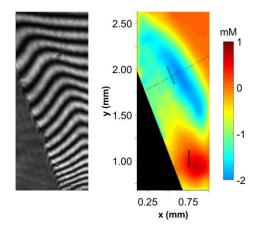


Figure S2.f. Copper electrodeposition on Fe cone (45 Deg): Interferogram and variation of concentration of  $CuSO_4$  at time= 45.0s. Initial  $CuSO_4$  concentration=300 mM; J=4.0 mA/cm<sup>2</sup>.

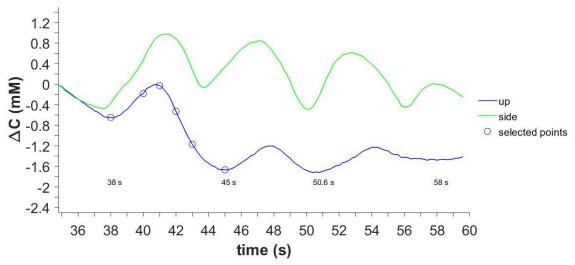


Figure S2.g. Case 4.0 mA/cm². Average of concentration variation in 2 rectangular ROIs 0.02x0.19 mm. Position coordinates (mm): [ $x_1$ =0.52;  $z_1$ =1.93]; [ $x_2$ =0.8;  $z_2$ =1.02]; period of oscillation: 6.67 $\pm$ 0.95 s