

Electronic Supplementary Information (ESI)

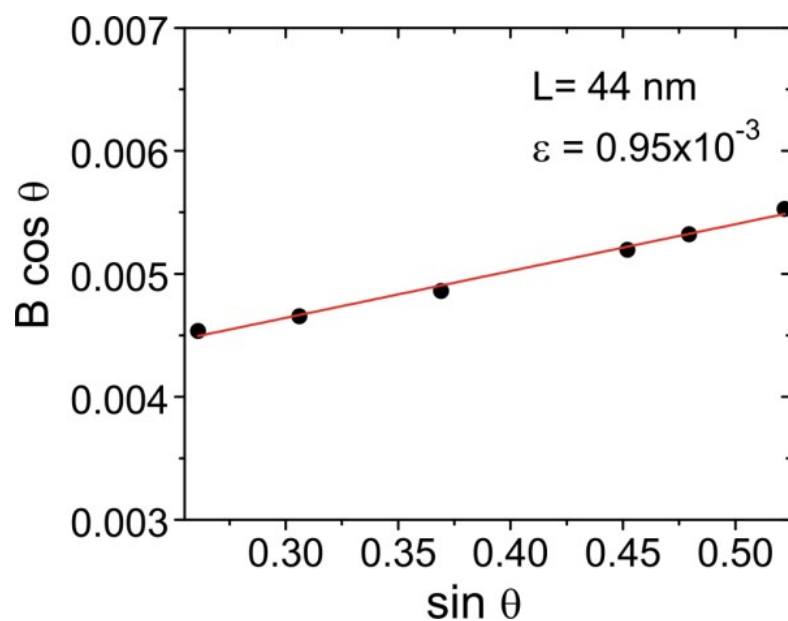


Fig. S1 Williamson-Hall plot for LZFR particles.  $L$  and  $\varepsilon$  are crystallite size and lattice strain, respectively.

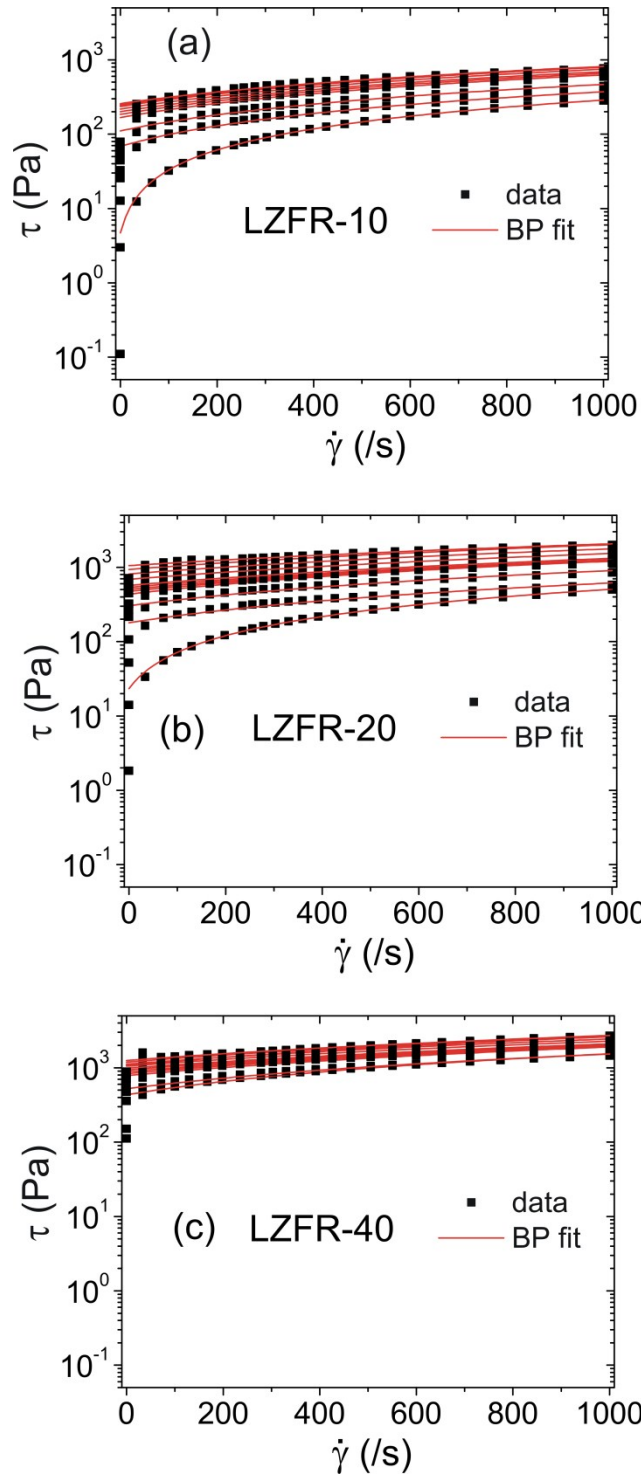


Fig. S2 (a-c) The Bingham plastic model fit flow curves and the derived plots. The applied B values are 0 mT, 86.5 mT, 181.5 mT, 365.2 mT, 518.5 mT, 663.7 mT, 812.8 mT, 956.3 mT, 1017.1 mT, 1078.8 mT, 1140.5 mT and 1.2 T, which correspond to curves from bottom to top. The samples codes are mentioned within each set of plots.  $\eta_p$  represents the post-yield plastic viscosity of the MRFs.