Electronic Supplementary Material (ESI) for CrystEngComm.

Atomic Imaging the Motion and Transformation of Pt_3Ni Nanoparticles in liquids

Junyu Zhang[a], Peng Zhao*[a,b]*

a. Instrumental Analysis Center, Laboratory and Equipment Management Department, Huaqiao University, Xiamen 361021, China

b. College of Chemical Engineering, Huaqiao University, Xiamen 361021, China

E-mail: zjy2020@hqu.edu.cn, zhaopeng@hqu.edu.cn

Fig. S1 The photograph of SiNx liquid cells.

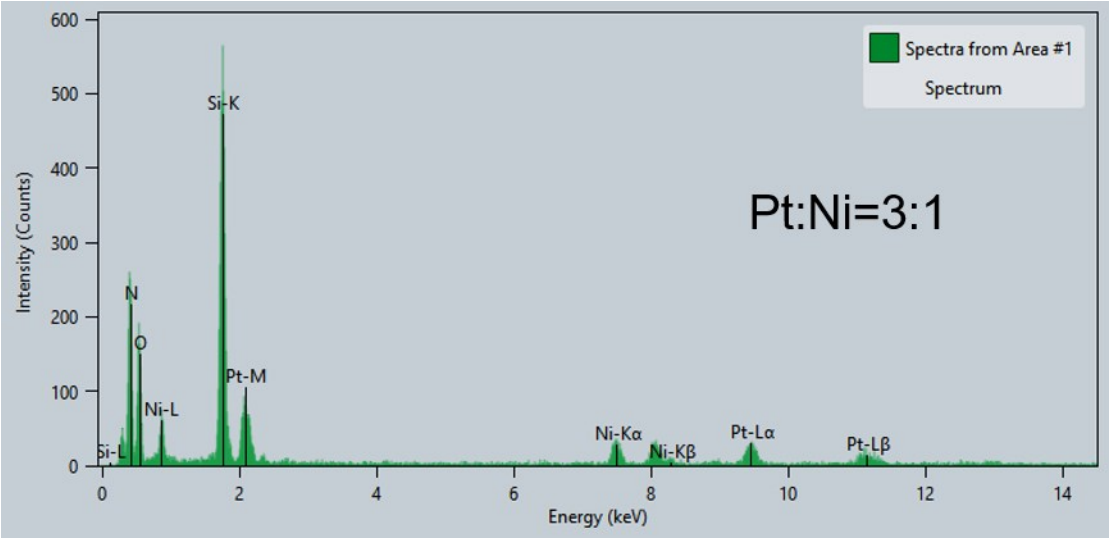

Fig. S2 The EDS spectra of for the nanoparticles in SiNx liquid cell by ex-TEM

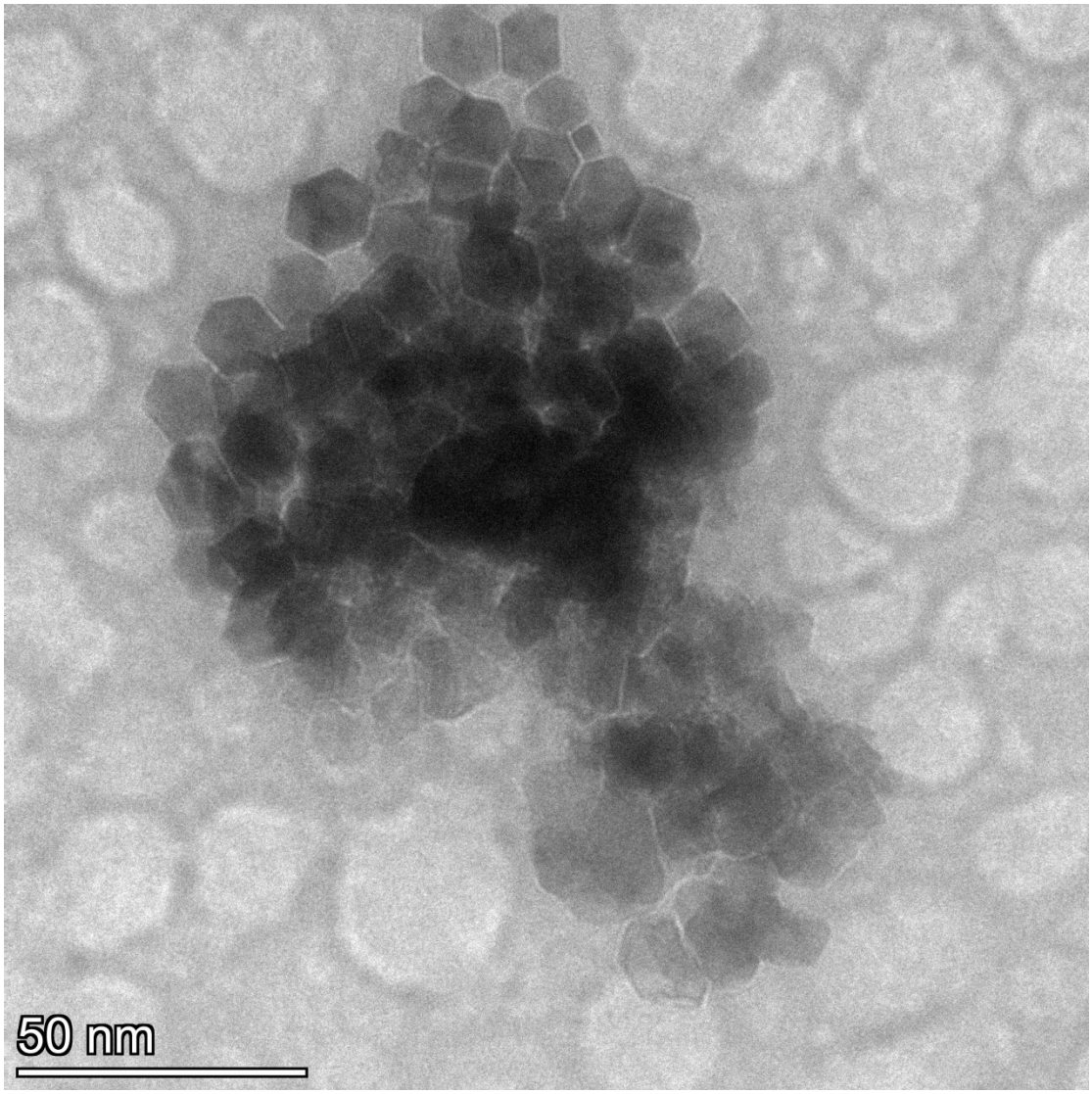

Fig. S3 The low-resolution TEM images showing the Pt_3Ni nanoparticles in the DMF solution.

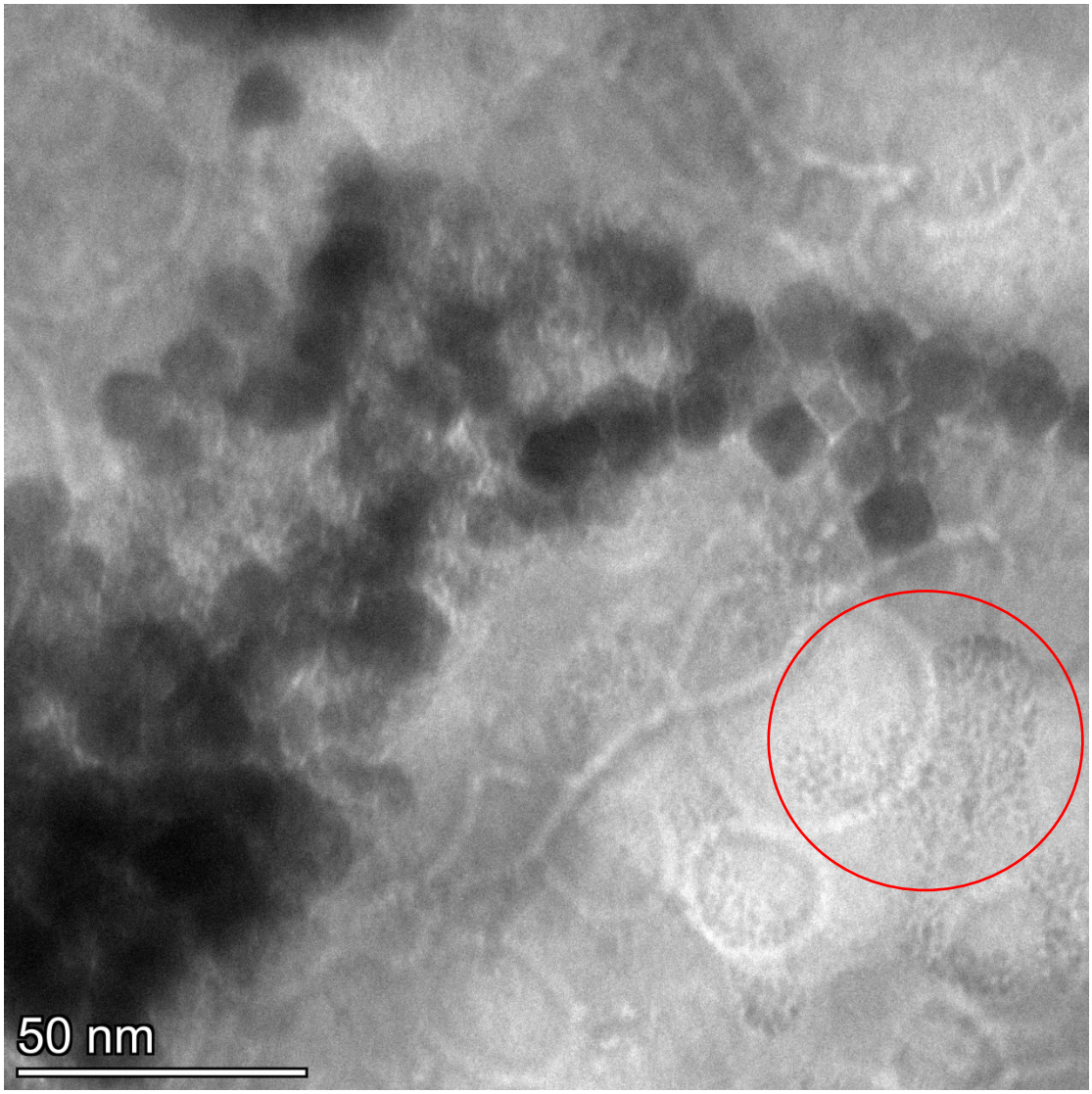

Fig. S4 The low-resolution TEM images showing the small nanopartilces in the DMF solution.

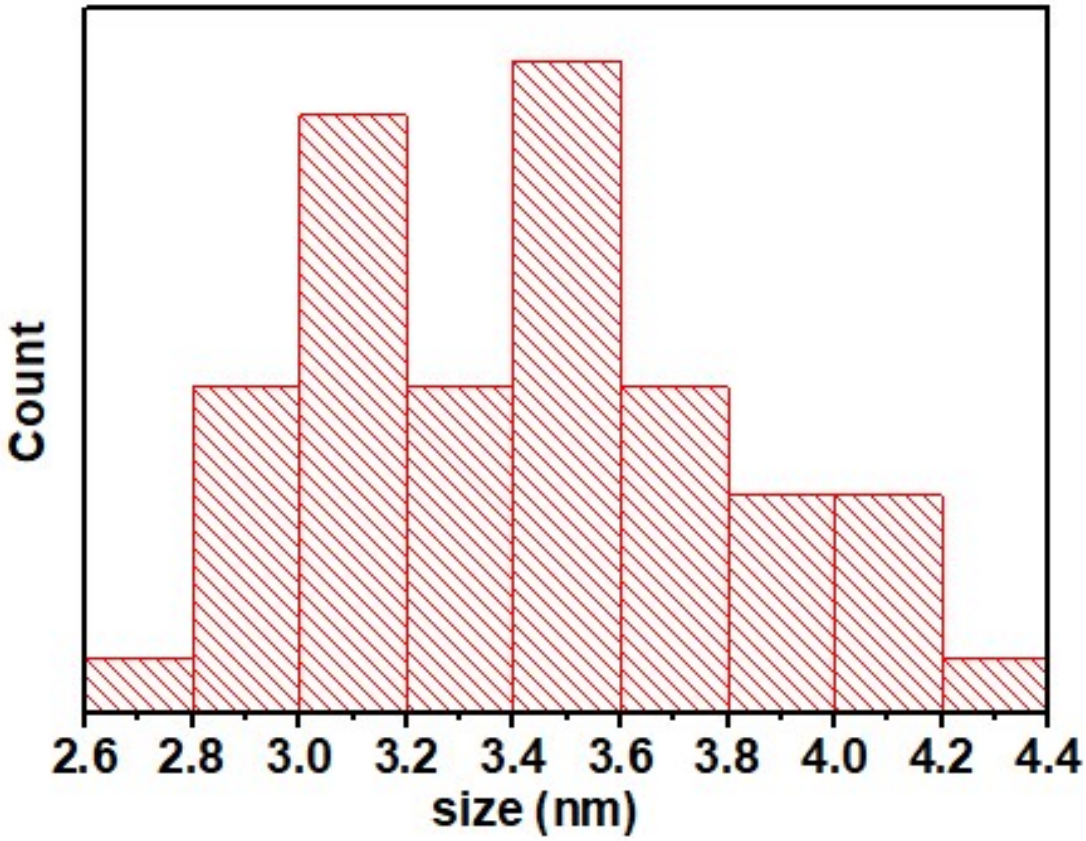

Fig. S5 the size of small nanoparticles

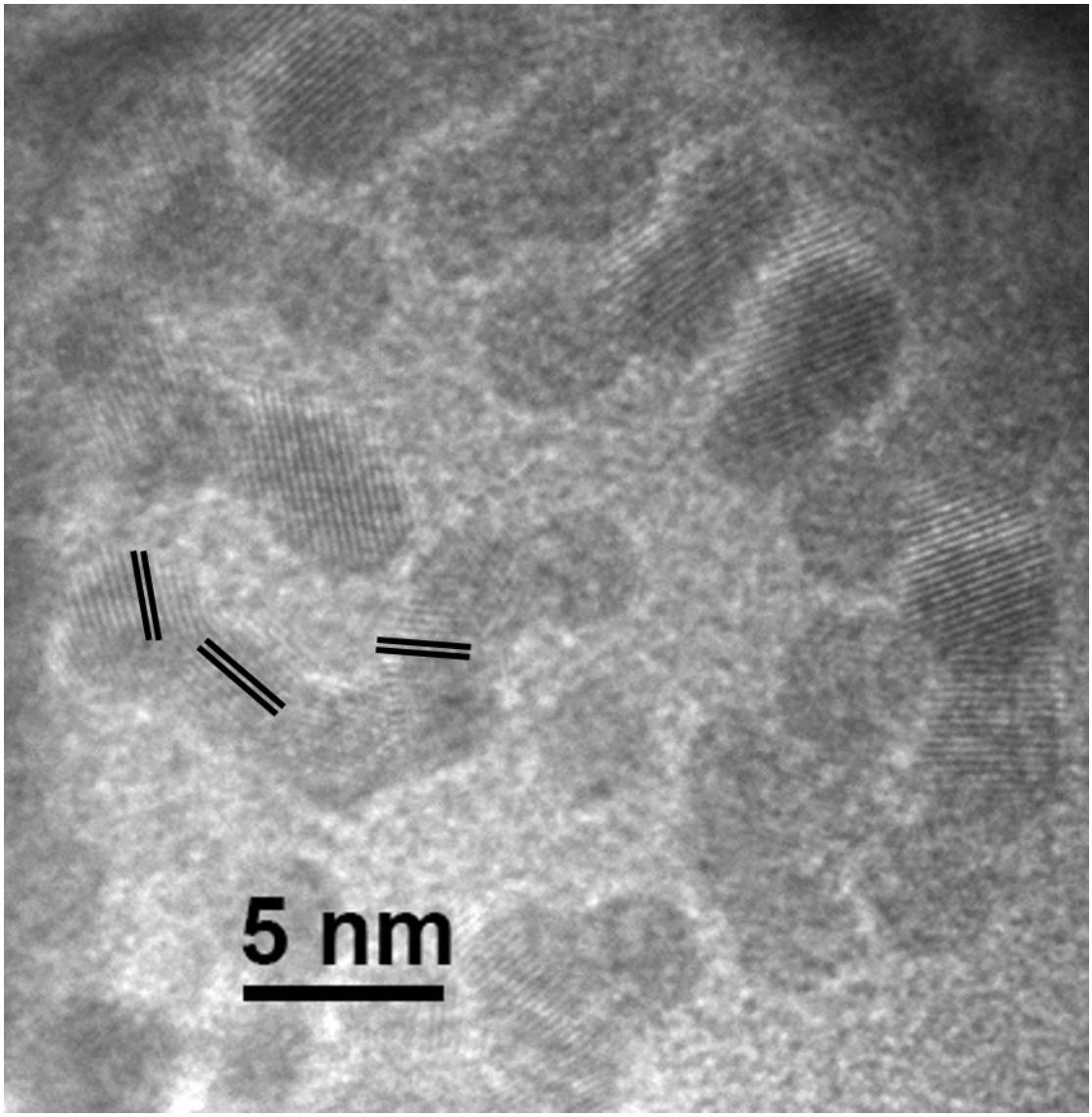

Fig. S6 The HR TEM images of Pt_3Ni nanowires

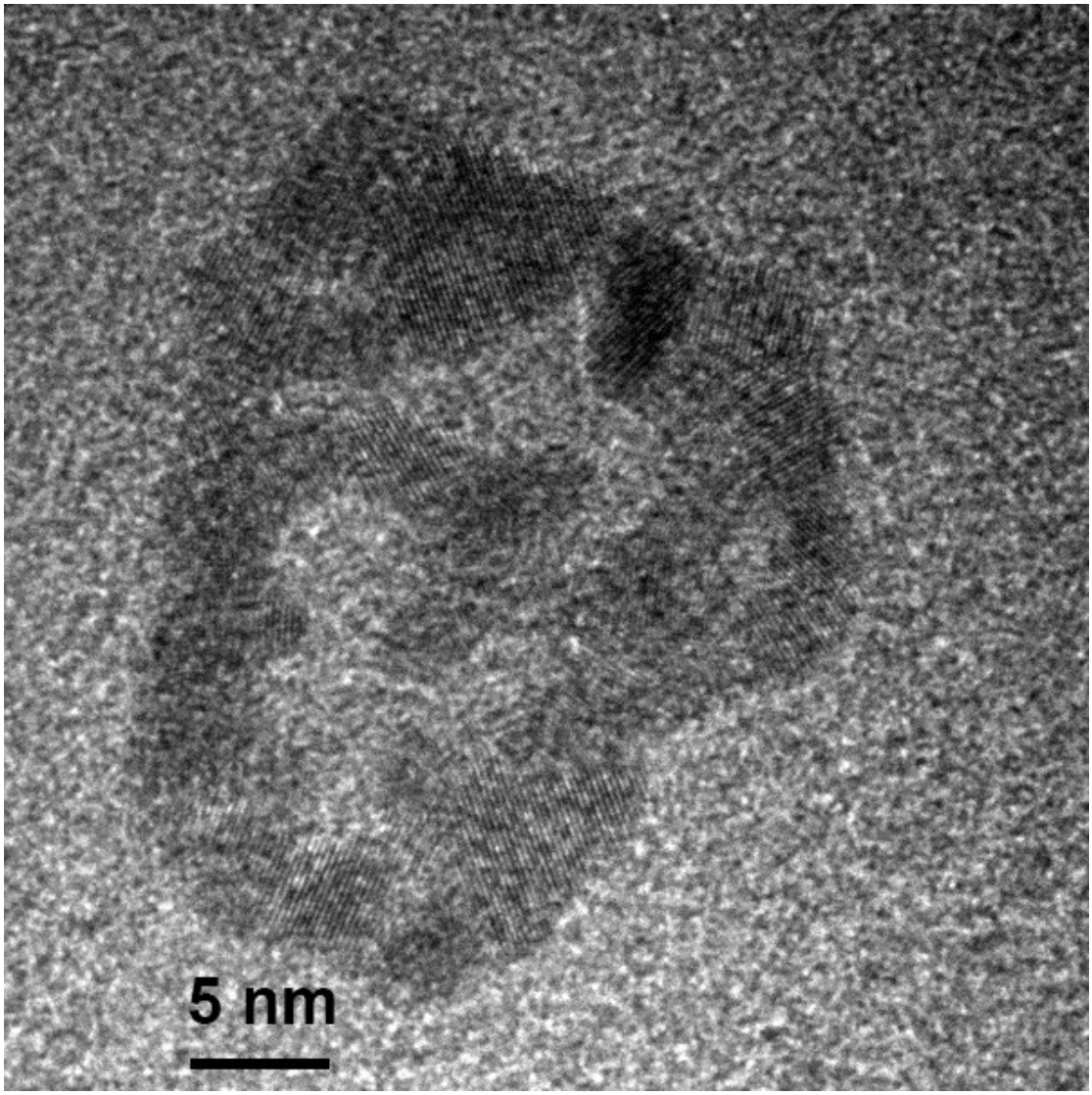

Fig. S7 The HR TEM images of Pt_3Ni rings

1. Movie Captions

Movie S1, S2 and S3: Atomic motion trajectories of single particle in liquid cell. The movie plays fifty times faster than real time. The dose rate during the data collection is about 3320 e/Å^2·s.

Movie S4: Atomic-scale reaction dynamics of a Pt_3Ni nanoparticle in liquid cell. The movie plays three times faster than real time. The dose rate during the data collection is about 5000 e/Å^2·s.

Movie S5: Formation of Pt_3Ni nanowires. The movie plays six times faster than real time. The dose rate during the data collection is about 6873 e/Å^2·s.