Iron-60 ($t_{1/2}=2.62$ Myr) have proven to be one of the significant tools to study the evolution of early solar system [1]. A high $^{60}$Fe/$^{56}$Fe ratio in meteorites would imply the birth of the solar system to the explosion of a nearby supernova. However, the initial $^{60}$Fe abundance at CAI condensation as well as its homogeneity was controversial according to the results from different meteorites. Solving the issue of abundance and distribution of $^{60}$Fe in multiple early solar materials is critical to assess the plausibility of the scenario of supernova-triggered solar system formation.

To study this issue, we have measured the Ni isotopic compositions of bulk HEDs, angrites and mineral separates from quenched angrites D’Orbigny and Sahara 99555 [2]. According to the correlation between $^{60}$Ni isotopic ratio and Fe/Ni ratio, $^{60}$Fe/$^{56}$Fe ratios obtained in isochrons range from $2\times10^{-9}$ to $3\times10^{-9}$. Depending on the Mn-Cr ages of HEDs and angrites, the initial $^{60}$Fe/$^{56}$Fe ratio can be estimated to be $\sim1\times10^{-8}$ at CAI formation. Moreover, chondrules and mineral separates from CB chondrite (Gujba) as well as two ordinary chondrites Semarkona (LL 3.0) and NWA 5717 (ungrouped 3.05) were also studied. No resolvable $^{60}$Ni excesses were observed in NWA 5717 or Gujba, giving an upper limit of $^{60}$Fe/$^{56}$Fe initial ratio of $3\times10^{-8}$ in the early solar nebula. Resolvable $^{60}$Ni excess was found in one Type II chondrule from Semarkona with high Fe/Ni ratio, translating into an initial $^{60}$Fe/$^{56}$Fe ratio at CAI formation of $\sim1\times10^{-8}$ in the region where Semarkona formed. Therefore we conclude that $^{60}$Fe was presented in a low abundance and well-mixed in the early solar system, implying that $^{60}$Fe could have been simply inherited from interstellar medium that made the solar system. On the other hand, a nearby stellar source for $^{26}$Al is still required. We favor the scenario of injection by stellar winds from one or several massive stars since $^{26}$Al can be decoupled from $^{60}$Fe successfully and transported into the parent nebula for solar system [3].