**Introduction**

DaG 1066 is a new meteorite found in 1999 by Romano Serra during an expedition for meteorite search in the Dar al Gani rocky desert area of Libya. The meteorite consists of four fragments, totally weighing 125 g, each one partially covered by fusion crust. A cut surface on one side reveals an achondritic texture. The type specimen (21.3 g) is on deposit at Museo di Storia Naturale dell'Università di Firenze, Florence, Italy. The Museo del Cielo e della Terra (OAM), Bologna, Italy, holds the main mass and a polished thin section.

**Textural features**

A thin section of the meteorite shows a coarse-grained matrix surrounding various inclusions of different lithologies. The matrix is mainly composed by olivine crystals from 0.2 to 1.5 mm of size and minor pyroxene and feldspar (figure 1). Olivine crystals are zoned, with Mg-rich rims.Opaque phases are pentlandite, FeNi metal, silicides (suessite Fe2Si, hapkeite Fe2S2, nasquite FeS), present as tiny inclusions along olivine grain boundaries, and graphite (figures 2 and 3). Most of the inclusions are fine-grained ureilitic aggregates, consisting of 90% olivine crystals separated by a diopside, Al-rich clinopyroxene. Two inclusions are metal-rich, display fine-grained (max. width 50 microns) textures and contain 60% vol. Fe-rich olivine crystals, 20% Al-rich clinopyroxene and 20% opaques, consisting of equal parts of Fe-Ni alloy and pentlandite (figure 4). Two inclusions are chondrules made of forsteritic olivine and enstatitic pyroxene, with no opaques.

**Instruments and methods**

Optical microscopy and imaging have been performed at the laboratories of the Dipartimento di Scienze della Terra dell'Università degli Studi di Firenze by means of an Axiosplan-2 polarizing optical microscope equipped with an Axiocam-HR camera. EMPA-WDS analyses have been performed at the Firenze laboratories of the IGG – CNR (National Council of Research) with a JEOL microprobe. SEM-BSE images and X-ray maps have been performed at the Dipartimento di Chimica dell'Università degli Studi di Firenze.

**Mineralogical features**

EMPA analyses performed on silicates of the matrix and on the inclusions confirmed that some inclusions are ureilitic (matrix: olivine Fa3.0-26.8, pigeonite Fs14.1Wo7.3; ureilitic inclusions: olivine Fa26.4, pigeonite Fs22.6Wo7.3) while other are CC-like clasts (Fa39.8; Fe/Mn = 94.7; Al-rich clinopyroxene: TiO2 = 0.3, Al2O3 = 8.4, Cr2O3 = 2.1, Na2O = 4.2, all in wt.%) or Fo,En-rich chondrules (olivine Fa0.3-3.0, enstatite Fs0.8Wo2.5). FIGURE 6: Blow-up of the SEM-BSE image presented in figure 5.

**Conclusions**

Although the presence of silicates [1,2,3,4,5,6], and of clasts of enstatite grains from E-chondrites, aubrites, CC matrix-like materials, anglesite and R-chondrules, as well as chondrules from type 3 OC [7,8,9], has already been reported in polymict ureilites, the compositional variability of silicates and the presence of a chondrule made of extremely reduced components (figures 5,6 and 7) was not reported to the best of our knowledge.

**References**