Crystalline achondrite 1154 : Showing the quite unique texture with angrite composition

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Meteorite specimen 1154 has been identified preliminary as an unknown type of achondrite which consists mainly of fassaite, plagioclase and olivine, with accessory spinel. This specimen shows brownish dark grey interior with tiny black fusion crust. The interior is very fine grained-homogeneous appearances. Under the microscope the sections are characterized by the quite unique texture of a very fine grained-holocrystalline lithology which is showing some liner with irregular patterns of slightly elongated brown pyroxene(fassaite)-clear plagioclase and very well elongated dendritic olivine aggragates. This unique textual patten looks like some dendritic textures which apper ofen in some terrestrial rocks of quenched igneous rocks and metamorphosed one. Pyroxene(fassaite) is the most aboundant mineral and have remarkably high FeO/MnO ratio, in which several pyroxenes are within the range of average lunar pyroxenes, but most of them clearly different from pyroxenes of lunar and basaltic achondrites.

Olivine is more Fe-rich with wide compositional range Fo4.1-35.9. Plagioclase is remarkably homogeneous and highly calcic, over An97. Bulk composition gives 38%SiO_2, 13.7%Al_2O_3, 23.4%FeO, 7%MgO, 15%CaO and FeS.

The meteorite 1154 with angrite composition might be belong to an unusual achondrite angrite, however it is clearly distinguished from the Angra dos Reis(stone) and all other angrites for it's quite unique unusual texture.