

**RECENT CLASSIFICATION OF NIPR ANTARCTIC METEORITES.**

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Classification of meteorites is the most important and essential task at the Antarctic Meteorite Research Center, National Institute of Polar Research, Japan (NIPR). Recently we published 6 issues of Meteorite Newsletter (Vol. 21-26) from 2012 to 2018 [1-6]. The total number of the classified meteorites is 4,936. They include Yamato, Asuka, and Belgica meteorites collected by Japanese Antarctic Research Expeditions. The Japan-Belgium joint expeditions also collected Asuka 09, 10, and 12 meteorites, which are shared by NIPR and Royal Belgian Institute of Natural Sciences (RBINS) in Brussels.

We classified Antarctic meteorites on the basis of petrographic observations of polished thin sections and compositions of olivine, pyroxene, and/or feldspar obtained by an electron microprobe analyzer (EPMA). Recently, we have started classifying meteorites by observations of polished thick sections mounted in epoxy, in order to reduce time and cost of sample preparations [7]. The sections are examined by an optical microscope under reflected light and the EPMA. Although some petrographic textures are difficult to observe (e.g., shock stage), we can classify groups of meteorites. The problem is the classification of petrologic types of ordinary chondrites using standard criteria by [8]. Thus, we modified the classification criteria based on the observations under reflected light, such as chondrule-matrix integration, secondary plagioclase, and mesostasis of chondrule. The detailed criteria were proposed by Yamaguchi et al. [7].

Meteorites in Newsletters 21-26 include 53 carbonaceous chondrites (CM, CO, CV, CR, CH, CK, and ungrouped), 4 enstatite chondrites (EH and EL), 7 R chondrites [1-2], 196 HED meteorites, 7 ureilites, 10 primitive achondrites (acaplucoites, lodranites, and winonaite), 2 mesosiderites (A 09545 and A 10143 [3]), 1 angrite (A 12209 [5]), and 3 martian meteorites (shergottites) (Y 002192 and Y 002712 [4], and A 12325 [6]).

We also published the bulk chemical compositions of 1,162 meteorites, including chondrites, HED, martian, and others, analyzed by the wet chemical method [9]. These data can also classify meteorites, and reflect the characteristic features of meteorites.

Requests for Yamato, Asuka (87 and 88) and Belgica samples will be reviewed in a timely manner by the curator at NIPR, and requests of Asuka 09, 10, and 12 meteorites by scientific members at NIPR, RBINS, Vrije Universiteit Brussel, and Université Libre de Bruxelles.

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