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## Prospecting of Ni mineralization based on geochemical exploration in Iran

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### Abstract

The aim of this study is to prospect Ni mineralization based on stream sediments and lithogeochemical data in Iran. Ophiolite belts of Iran specifically Nain-Baft, Khoy complex and East of Iran belts which are studied in this research. To do this, stream sediment and lithogeochemical data are interpreted by a Concentration-Area (C-A), Concentration-Perimeter (C-P), Concentration-Number (C-N) fractal models and staged factor analysis in the ophiolitic belts. Lithogeochemical data only used for general exploration in the Patang prospect which is a proper target for Ni exploration. Results obtained by this research indicate that Ni has a direct correlation with Cr and Co and also, the main Ni anomalies are associated with chromite occurrences/deposits. Moreover, the main Ni anomalies occur in ophiolite sequences and ultrabasic rocks especially serpentinized peridotite and harzburgite serpentinite. In addition, Ni mineralization is prospected in Patang (eastern Iran) and Anarak (Central Iran) prospects for detailed exploration.

**Keywords:** Nickel; Chromite; Ophiolite belt; Fractal models; Staged factor analysis; Iran

### 1. Introduction

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