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Review

Shape maps and polyhedral interconversion paths in transition metal chemistry

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Contents

Abstract

A systematic study of the stereochemistry of the coordination sphere of transition metal compounds has been carried out recently from the point of view of the continuous shape measures (CShM). In this review, the concept of the continuous shape measures is summarized and the derived tools, the shape maps and the path deviation functions are described. The main stereochemical trends that have been deduced from the application of such tools to more than 23,000 crystallographically independent fragments of coordination numbers between four and eight are also summarized.

Keywords: Continuous shape measures; Stereochemistry; Coordination polyhedra

1. Introduction

Coordination chemistry was born as a scientific discipline when Alfred Werner divided metal ammino complexes in two

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