Materials chemistry; Design and Synthesis of Luminescent and Biologically Active Materials

Abstract

The need to synthesise new materials is driven by the need for materials with specific properties. Those properties are determined by the final application. In this talk we will explore the design of materials which are used in Luminescent and Anti-microbial applications. From the materials perspective we will focus on inorganic–organic hybrid materials, metal phosphonates and metal oxides, and discuss how we can make such materials. We will consider how the choice of metal changes the luminescent response and how materials can be constructed by design at the atomic level. considering antimicrobial materials we will discuss how structure influences the release of active species and can result in materials which are therapeutic but not toxic.