

## Mixed valence vanadium compounds: current problems & outlook

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Vanadium oxides are widely studied for their potential technological applications as they exhibit intriguing physical properties such as Metal Insulator Transitions accompanied by magnetic transitions.<sup>1–</sup>

<sup>4</sup> Moreover, ternary vanadates find applications in catalysis while showing a remarkable solid state chemistry.<sup>6</sup>

Amongst vanadium compounds, the so-called Magnéli phases with the general formula  $V_nO_{2n-1}$  and Wadsley phases with the general formula  $V_nO_{2n+1}$  are of special interest since they give rise to a homologous series of compounds with closely related crystal structures.<sup>1,5</sup> The parent compounds for Magnéli and Wadsley phases are  $V_2O_3$  and  $V_2O_5$ , respectively, thus making them of a high importance.

In this presentation, key characteristics of mixed-valence compounds are outlined, and selected features of vanadium chemistry are discussed. Current issues in the field and the application of vanadium materials are debated.

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