parts produced through additive manufacturing, or 3D printing. Scientists at the Chinese Academy of Sciences, specifically the State Physics, Hefei Institutes of Physical Science, recently explained their findings on the effects of impurities on MgO materials on October 16, 2020. This research, published in the Malaysian Journal of Physics, highlights the importance of understanding the role of impurities in materials science.

The research was led by a team from Japan, whose work was published in the journal Physical Review Letters. They focused on the atomic-level effects of impurities on MgO, which is a material used in various applications, including electronics and ceramics. The team used advanced techniques such as X-ray diffraction and Raman spectroscopy to study the material's properties.

In one state the material is catalytically active, while in another state it is not. This behavior is due to changes in the polymorph, which is a different form of the material resulting from differences in their structures. These changes can significantly affect the material's performance in various applications.

The research has implications for the development of new materials for use in a variety of industries. It also highlights the importance of understanding the role of impurities in materials science and the need for advanced techniques to study these effects.

In addition, the team's work on MgO materials is expected to lead to breakthroughs in a variety of fields, including electronics and ceramics. It also opens up new possibilities for the development of materials with unique properties that can be used in a range of applications.

The research was published in the Malaysian Journal of Physics, providing a valuable contribution to the field of materials science.

For more information on the research, contact the corresponding author, Prof. Zhang Yongsheng, at the Institute of Solid State Physics, Chinese Academy of Sciences (Tel: +86-10-8230-3967, E-mail: zhangyongsheng@iissp.ac.cn).

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