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## Geomaterial science for Advanced Utilization of industrial applications

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The recent rapid advances in technology have resulted in an increased demand for the high-precision processing of the industrial materials such as silicon wafer and/or glass. The machine base in high-precision processing is more commonly used natural stone, and it is called precision stone and usually made from gabbros. The precision stone has a very flat surface, however, that flatness is very sensitive to humidity. Here, I introduce mechanics of micro-deformation of precision rock from a microstructural viewpoint. Additionally, the wheel stone is one of the important tools for industrial technology and manufacturing industry. However, as for the finishing wheel stone, called Awasedo, it is assumed that the natural wheel stone may still more excellent than the artificial wheel stone. Awasedo is the most appreciated and most commonly used by craftsman whetting the edge of a Japanese sword. In this paper, I introduce the excellent performance of Awasedo compared with the artificial wheel stone. Here, we characterized the microstructure of Awasedo, and we find out that the micropore of the high quality Awasedo is mainly composed of sub-micron pores.

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