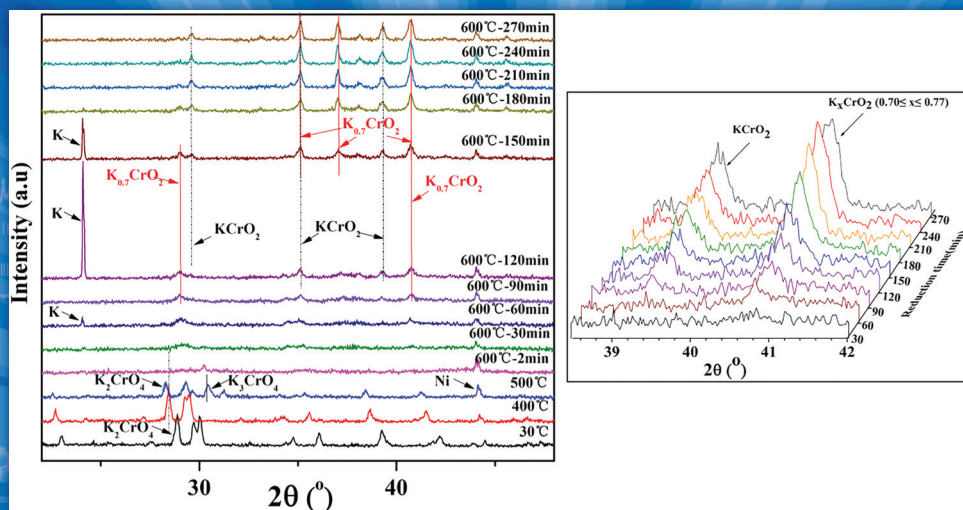


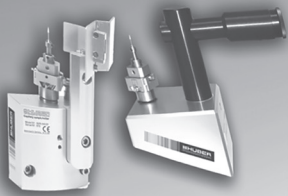
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*Journal of Materials Characterization*



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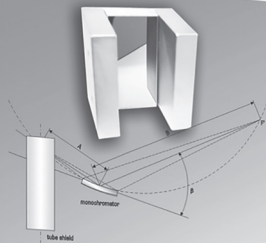


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# Powder Diffraction

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On the Cover: In-situ X-Ray diffraction is a key characterization tool to study phase transformations and reaction under various temperature and controlled environmental conditions. In this *PDJ* issue the paper "In-situ high-temperature diffraction studies of reduction of  $K_2CrO_4$  and the formation of  $K_xCrO_y$  compounds" by Liang Shuting of Tsinghua University, the author shows in his Figures 3 (left) and 5 (right) the isothermal reduction of  $K_2CrO_4$  powders held at 600 °C to form  $KCrO_2$  and  $K_xCrO_2$  ( $0.70 < x < 0.77$ ). During heat to 600 °C they observed the onset of  $K_3CrO_4$  and an amorphous intermediate phase transition. At 600 °C, after an "amorphous period" of approximately 30 min, the formation of crystalline phases  $K_xCrO_2$  and  $KCrO_2$  was observed.

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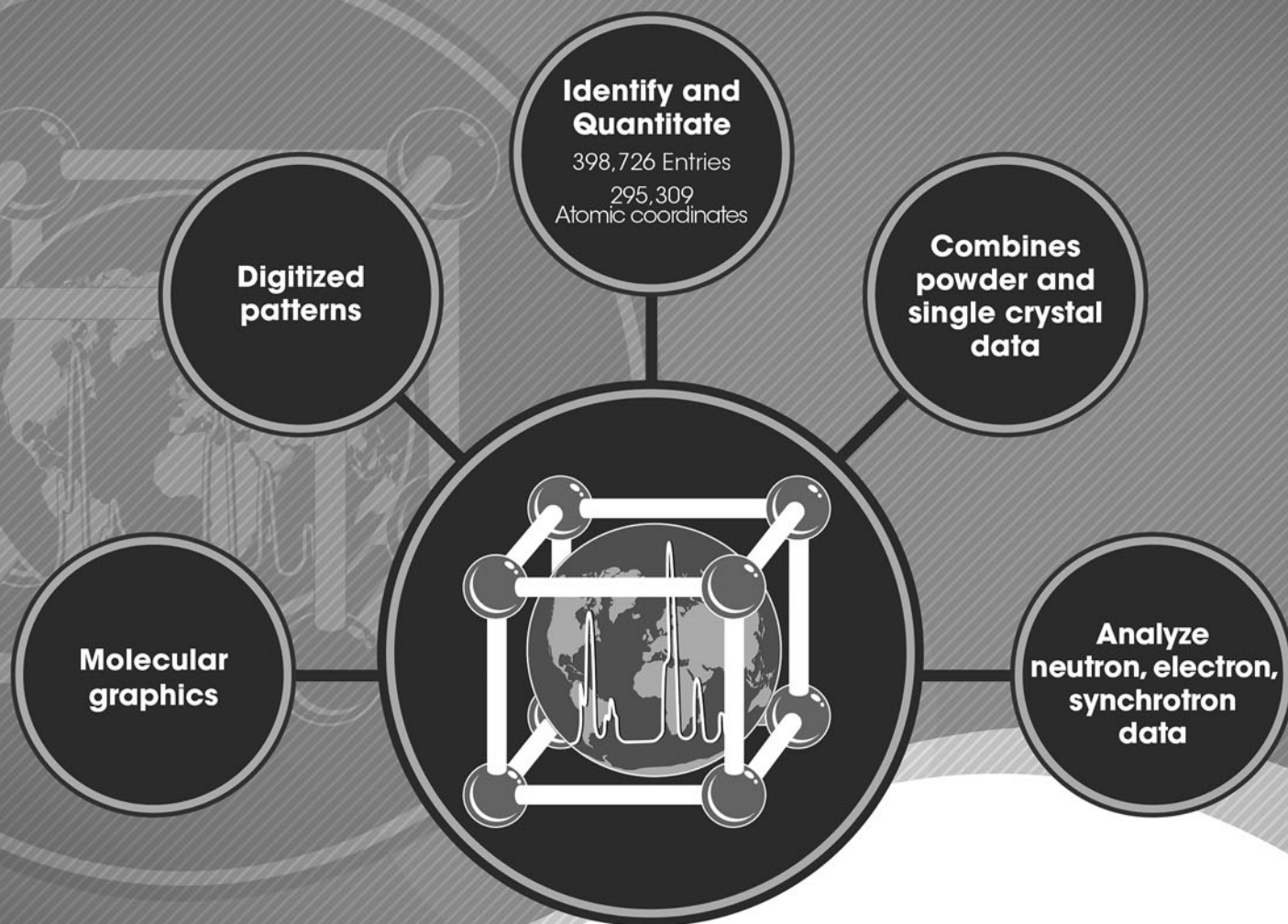
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