國立臺灣大學技術行銷表

台大案號: 06A-101007

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產品/技術名稱	碳化矽粉之純化
發明人/單位	戴怡德 教授/台灣大學 化工系；林彥志 博士/台灣大學 化工系。
產品/技術說明	由於碳化矽粉具有高硬度與高穩定性，因此多被應用於晶體或金屬之研磨與切割方面。以矽晶片之切割與研磨為例，使用後的切割液或研磨液中含有矽與碳化矽粉之混合粉體，而本技術能從該混合粉體中，將碳化矽粉純化。另外，混合粉體並不限定來源。
應用範圍	1. 純化之碳化矽粉可再重製成研磨液或切割液，以作為晶片切割之用。 2. 純化之碳化矽粉可作為製作高硬度陶瓷之材料。
產品/技術優勢	1. 純化之方法簡單，製程容易放大。 2. 本專利所回收之碳化矽粉純度較高，具有競爭優勢。
市場潛力	目前矽晶棒在切割成晶片後仍然會產生矽與碳化矽之廢漿液，而且此物質均以掩埋或堆置的方式處理。倘若以本技術來處理這些廢漿液，則回收之碳化矽粉不僅可再生，也解決廢漿液污染環境的問題。目前在產業上仍無相關技術可從廢漿液中回收高純度的碳化矽粉，所以應具有市場發展之潛力。
產品/技術 智財權保護方式	專利申請中
圖片 (已公開之成果可提供圖片)	高純度的碳化矽粉 

Marketing Abstract of NTU's Invention Disclosure

NTU's docket no:_____(由產學合作中心填寫)

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Title	Purification of Silicon Carbide Powder
Inventor (s)	Professor Yi-Der Tai; Dr. Yen-Chih Lin
Brief Description	The silicon carbide powder was widely applied in lubricating and cutting of crystal and metal due to its hardness and stability. As the silicon ingot was considered, the used slurry after slicing ingot contained the mixture of silicon and silicon carbide powder, which could be purified by this invention. In addition, the mixture of silicon and silicon carbide powder could be from any other sources.
Fields of Application	1. The purified silicon carbide powder can be the material of lubricating liquid and sawing slurry, which is used to slicing silicon ingot. 2. The recovered silicon carbide powder can be used to make the ceramic with high hardness.
Advantages	1. The process of purification was simple, and easy to scale up. 2. The purity of recovered SiC powder by using this invention was high.
Market Potential	At present, the waste slurry produced by wire-saw process was buried or stored up. If it can be recovered by using this invention, the SiC powder can be recycled and the problem of pollution could be solved. In the industry, there was no technique of recovering the high-purity SiC powder from the waste slurry; therefor this invention should have the market potential.
IP Right(s)	
Picture	High-purity SiC powder.