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Methods of Filtering Stable Quasicrystalline Nanoparticles MATTHEW CAPUTO, BRYON TIMBS, STEPHANIE MEYERS, MICHAEL BAUER, EMILY CAREY, LUKE SIMPSON, STEVEN LIPPOLD, CHUNFEI LI, Clarion University of Pennsylvania — Quasicrystalline nanoparticles have great potential for industrial use and in the medical field. Some of these applications include hydrogen storage and a replacement for gold nanoparticles, which are used in the treatment of cancer. Our project involves the isolation and filtration of stable quasicrystalline nanoparticles to a size of less than five micrometers from an arc melted sample of $Al_{59}Cu_{37}Fe_3Si_1$. Successful filtration of less than five micrometers was completed using a SPI black membrane screen filter into a concentrated ethanol solution. It was then confirmed using a Tescan Vega 3 SEM. The composition of the nanoparticles was examined by Oxford, Aztec EDS.

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