



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> <b>Patrick D. Mobley</b>	<b>Project Number</b> <b>J0719</b>
<b>Project Title</b> <b>Electrostatics: Dirod Enhancement</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> My goal is to make the dirod, an electrostatic generator, the most effective it can possibly be. The first step that I took towards this goal was to test the rod material to try to improve it by testing different metals. The most effective will replace the previously used rod material, and I will continue my goal.</p> <p><b>Methods/Materials</b> I constructed a dirod out of what materials I could find and began testing. I tested aluminum, brass, and copper rods to a total of 10 trials each. I chose these metals because they are commonly used in generators and electric appliances. I tested the materials by running the generator for exactly 15 seconds with a 6mm spark gap. After testing them, I gathered my results.</p> <p><b>Results</b> The material brass, was the most effective at creating sparks in a given amount of time. Aluminum performed the worst but still aquired a good number of sparks.</p> <p><b>Conclusions/Discussion</b> My conclusion is that brass is the most effective rod material for the dirod. Also, by comparing rod prices, I figured out that brass is also the most expensive.</p>	
<b>Summary Statement</b> My project is about testing and observing different rod materials to make the most effective dirod.	
<b>Help Received</b> Dad helped build dirod; brother helped with graphs.	