We produce a “drop-in” high capacity anode nanomaterials in a low cost and ecofriendly manner for battery manufacturers.

Our Opportunity

Problem worth solving
As more devices become “smarter” and begin to gain wireless capabilities, battery reliability becomes an increasing need and graphite anodes need to be improved to meet these demands with higher capacity at a lower cost.

Our solution
Our customers will save time and money by using batteries that last 3 times longer than standard batteries available in the market.

Target market
1. Internet of Things
2. Home Security
3. 1.5-3 V rechargeable batteries

Competitors | How our solution is better
--- | ---
Targray | Higher Capacity, Lower Cost
Shenzhen BTR | Higher Capacity, Lower Cost
Hitachi Chemical Co. | Higher Capacity, Lower Cost
Mitsubishi Chemical | Higher Capacity, Lower Cost
Shanshan Tech. Co. | Higher Capacity, Lower Cost

Funding needed
$1.2M
Funds will be used to develop and optimize prototype, establish scaling up process at Argonne, and pilot test with anode manufacturers.

Sales and Marketing

Sales channels
We will be directly selling to the battery anode manufacturers and also working closely with anode manufacturers by providing a service that will add value by increasing the capacity of their anodes.

Marketing activities
We will attend battery conferences to present and connect with potential customers. We will also develop online presence through a website.

Forecast

Revenue streams

Major costs
We will be selling products directly to the anode manufacturers and providing a service to add value to their existing products via our patented technology. The major costs will be related to acquiring and operating the equipment, as well as renting space to develop our nanocomposites. As our company grows, the bulk production will lower the cost of our product.

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### Milestones

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Dates</th>
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<tbody>
<tr>
<td>Optimization of Nanocomposite</td>
<td>Sep 1, 2020</td>
</tr>
<tr>
<td>Structural Characterization</td>
<td>Feb 1, 2021</td>
</tr>
<tr>
<td>Prototype Full Cell Development</td>
<td>Jun 1, 2021</td>
</tr>
<tr>
<td>Pilot Testing</td>
<td>Feb 1, 2022</td>
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</tbody>
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### Team and Key Roles

- **Cesar Villa**
  - Co-founder, CTO
  - 5th year Doctoral Candidate in Materials Science & Engineering, 6 years hands on lab experience in energy material processing and analysis

- **Dr. Vikas Nandwana**
  - Co-founder, CEO
  - Award winning researcher/inventor in the field of functional nanomaterials. With more than 40 journal articles, book chapters, and 7 patents

- **Linggang Jiang**
  - Business Development
  - The Chinese Institute of Certified Public Accountant; 3 years experience in Deloitte as a senior auditor; 1 year experience in investment banking

- **Gabrielle Stein**
  - Business Development
  - The Chinese Institute of Certified Public Accountant; 3 years experience in Deloitte as a senior auditor; 1 year experience in investment banking

- **Troy Daley**
  - Product Development
  - Senior Undergraduate in Chemical Engineering, Certificate in Sustainability/Energy; 1 year experience commercializing national lab tech

- **Kyle Owen**
  - Product Development
  - Master’s student in Chemical Engineering, 5 years experience in project engineering and validation engineering at large pharmaceutical site

- **Joshua Kim**
  - IP Strategist
  - Master’s student in Chemical Engineering; 2 years experience in computational models to assess energy transfer + battery performance, process engineering

- **Professor Vinayak P. Dravid**
  - Technical Advisory Board
  - Abraham Harris Chaired Professor of Materials Science & Engineering at Northwestern University. Founding director of the NUANCE Center.

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### Partners and Resources

![Argonne National Lab MERF](image)

**Argonne National Lab MERF**

Manufacturing engineering research facility to assist with scale up