Engaging Scientists & Engineers from Industry

Melissa Russell, Chief Industry Relations Officer, OSA – The Optical Society
OSA was founded in 1916 with 30 members
Today, OSA has 240 corporate members & 1,000+ corp. customers
Industry’s role in the Optics and Photonics Ecosystem

Optics and Photonics Industry Needs

OSA’s Industry Engagement Efforts
The classic view of innovation
The modern view of innovation
Industry’s Role in our Ecosystem

**Gap between applied science & commercial applications**

- Applied Optics, Spectroscopy, Information Theory
- Biology, Medicine (e.g., DNA, proteins, cells)
- Materials Science, Chemistry (e.g., crystallography)

---

- End-Use
- System Integration
- Component
- Materials

---

- Communications
- Imaging
- Instrumentation
- Machine Tools
- Displays
- Lighting
- Solar
U.S. corporate investment in photonics R&D

- Industry: 76%
- Federal Government: 24%
## Industry’s Role in our Ecosystem

### Leading U.S. photonic component supplier R&D

<table>
<thead>
<tr>
<th>Company</th>
<th>2012 FY Revenues ($M)</th>
<th>2012 FY R&amp;D ($M)</th>
<th>2012 FY R&amp;D (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total (for these companies)</strong></td>
<td>18,674</td>
<td>2,004</td>
<td>11%</td>
</tr>
<tr>
<td>First Solar</td>
<td>3,369</td>
<td>132</td>
<td>4%</td>
</tr>
<tr>
<td>Sun Power</td>
<td>2,418</td>
<td>63</td>
<td>3%</td>
</tr>
<tr>
<td>Corning (overall company)</td>
<td>8,012</td>
<td>745</td>
<td>9%</td>
</tr>
<tr>
<td>JDS Uniphase</td>
<td>1,682</td>
<td>246</td>
<td>15%</td>
</tr>
<tr>
<td>Omnivision</td>
<td>898</td>
<td>111</td>
<td>12%</td>
</tr>
<tr>
<td>Cree</td>
<td>1,165</td>
<td>143</td>
<td>12%</td>
</tr>
<tr>
<td>Finisar</td>
<td>953</td>
<td>146</td>
<td>15%</td>
</tr>
<tr>
<td>Coherent</td>
<td>769</td>
<td>78</td>
<td>10%</td>
</tr>
<tr>
<td>Newport</td>
<td>595</td>
<td>53</td>
<td>9%</td>
</tr>
<tr>
<td>Cymer (now part of ASML)</td>
<td>539</td>
<td>188</td>
<td>35%</td>
</tr>
<tr>
<td>IPG Photonics</td>
<td>563</td>
<td>31</td>
<td>6%</td>
</tr>
<tr>
<td>Oclaro</td>
<td>385</td>
<td>67</td>
<td>17%</td>
</tr>
</tbody>
</table>
Federal Spending on “R” vs. “D”

Values refer to fiscal year 2009, and to total federal spending, not just R&D performed by government agencies themselves. Source: Science and Engineering Indicators 2012, U.S. National Science Foundation, citing internal data.
What is Industry looking for?

1. Access to timely Research, Market & Funding Info.

2. Opportunity to network and find new customers, partners, collaborators and distributors

3. Participate in programs that have an impact on the community

4. Recruit qualified R&D staff

5. Showcase new technologies/products
National Photonics Initiative
OSA Industry Engagement

OSA’s Industry VIP and Student Events
OSA Industry Engagement

OSA works with nearly 900 exhibitors and sponsors annually
OSA Industry Engagement

OSA’s Enabled by Optics Contest

Optics Impact on the World

Student and Corporations

Videos and Live Presentations
Part of the conversation, planning & implementation

1. Policy/GR Committees
2. Promotional, meeting, or tradeshow committees
3. Programming/Education committees