

Korea-US Nanoforum
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Education

Moderators:

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1. Encourage research collaboration and exchange of graduate students and postdocs.

Must be driven by real scientific collaboration.

Funding can be found through nsf and various korean sources.

Good idea to focus on specific areas:

Carbon Nanotubes

Electronics beyond cmos.

Ideas:

- Korea-US workshop for collaboration in cnt properties and devices.
- similar for electronics beyond cmos
- Binational exchange in combination with scientific meetings.
- Couple US university, Industry with Korean university and Korean research institute with strong industrial connections.

Recommendation:

Establish binational workshop on cnt for start in Hawaii...probably approx 6 representatives from each country.

Seek initial univ/industry for exchange

2. What to teach? There is strong need for quality educational materials and corresponding curricular definition and suggestions at the undergraduate level (and some graduate level materials).

Fairly complex set of needs

Recommendation: establish bi-national task force.

- Identify approx 12 people
 - Look beyond centers to educationally involved people
 - Some representative from NEU, educational community
- Hold task force meeting and implement recommendations
- Task force to define plans for implementation of:
 - Definition of curricular elements for nanoscience incorporation into university and smaller college curricula along with sources.
 - Seek development of new books and high quality educational materials needed.
 - Seek quality materials in areas such as nanomechanics, nanothermodynamics etc.
 - Encourage collaborative preparation of materials, text books etc.

3. Bring more women scientists and engineers into nanoscience (at undergraduate level as well as k-12)

Recommendation:

Binational exchange of role models for women:

- Group of visiting lecturers with strong story.
- Exchange of role model professors...month or semester stay. Offer financial incentives etc.
- Include K-12 activities (such as those of WISE) into these exchanges.

4. Exploit opportunities in media developments to bring educational materials to broad range of people.

Recommendations:

Take existing materials developed at nanocenters in US and bring to Korean venue. [start with pilot project such as RPI molecularium - will need to work with Korean counterpart to adapt material and experiment with presentation].

Create traveling exhibit of nanoscience-based images and artworks

Hold workshop/conference of key people both in Korea and US.

Exhibits could be shown at professional society meetings but also in hallways etc.

Could create calendar or other artistic location.

Could create set of posters somewhat like the aps series for widespread distribution.

5. Bring entrepreneurship into Nanoscience curriculum.

translate successful programs to korea...visa versa

Recommendation:

This idea needs more work before implementation.