1. What are commonly refereed to as major benefits of polymer solar cells?

- [x] Flexibility

Correct

That is correct

Polymer solar cells are typically printed or coated on flexible substrates.

- [x] Production speed

Correct

That is correct

Roll-to-roll production techniques ensures that polymer solar cells can be produced at high speeds

- [ ] Efficiency
- [ ] Stability

2. What constitutes the main differences between polymer solar cells and silicon solar cells.

Silicon solar cells use crystalline silicon while polymer cells use carbon based organic compounds applied in a thin layer to a synthetic backing.

✓ **Correct**

Polymer solar cells are:

- Flexible
- Solution processable
- Can be manufactured on roll-to-roll equipment

From an operational point of view polymer solar cells are hindered by a very low carrier lifetime. They are therefore almost exclusively made with a bulk hetero junction.

3. What is the reason that polymer solar cells typically use a bulk heterojunction?

- (●) Diffusion length of the carriers
- ( ) Ease of production
- ( ) Flexibility of the absorber layer

✓ **Correct**

That is correct

The diffusion length of the charge carriers is quit limited in the polymer semiconductors. Therefore a bulk hetero junction increases the interface area between the two materials and vastly increases the chance of a dissociation of the electron and the hole.