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Device physics of colloidal quantum dot solar cells

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Stellingen
behorende bij het proefschrift
Device physics of
colloidal quantum dot solar cells
van
Mark Jonathan Speirs

1. Building tandem solar cells is very challenging, but there is great potential for efficient solar cells. (Ch. 2).
2. Despite introducing an extra interface, adding a shell of CdS to quantum dots reduces the amount of surface trap states. (Ch. 3)
3. Temperature dependent measurements are a valuable tool in understanding the working mechanisms of solar cells. (Ch. 4)
4. There is still much room for improvement of PbS QD solar cells featuring a pn-junction by optimisation of the doping concentrations. (Ch. 4&5)
5. Alternatives to layer-by-layer deposition will have to be found if PbS QD solar cells are to become a viable technology.
6. Statements of scientists aren't necessarily statements of science.

- John Lennox

7. I feel like one of the reasons we are struggling inadequately today is because we reckon our costs on too shortsighted a basis and are later overwhelmed with the unexpected costs brought about by our shortsightedness.

- Sir R. Buckminster "Bucky" Fuller

8. There is a fine line between the Einstein's (incorrectly attributed) definition of insanity, and admirable perseverance.
9. Faith can offer little to science. To the scientist, much.
10. A good scientist must have enough humility to admit when he is wrong, and to ask questions about what he doesn't understand.