REFERENCES

1. Williams E, *The Physics and Technology of Xerographic Processes*, Wiley, New York, NY (1984).
2. Mort J, *The Anatomy of Xerography: Its Invention and Evolution*, McFarland, Jefferson, NC (1989).
3. Chittick R, Sterling H, in Adler D, Fritzsche H, Eds, *Tetrahedrally Bonded Amorphous Semiconductors*, pp. 1–11, Plenum Press, New York, NY (1985).
4. Spear W, LeComber P, *Solid State Commun.* **17**, 1193 (1975).
5. Carlson D, Wronski C, *Appl. Phys. Lett.* **28**, 671 (1976).
6. Perlin J, *Space to Earth: The Story of Solar Electricity*, aatec Publications, Ann Arbor (1999).
7. Wronski C, Carlson D, in Archer M, Hill R, Eds, *Clean Electricity from Photovoltaics*, World Scientific, Singapore (2001).
8. Yang J, Banerjee A, Guha S, *Appl. Phys. Lett.* **70**, 2977 (1997).
9. Fritzsche H, *Mater. Res. Soc. Symp. Proc.* **609**, A17.1.1–12 (2001).
10. Vaněček M Poruba A, Remeš Z, Beck N, Nesládek M, *J. Non-Cryst. Solids* **227–230**, 967 (1998).
11. The figure was calculated based on the hemispherical irradiance (37° south facing) American Society for Testing and Materials (ASTM) Table G159-98 Standard Tables for References Solar Spectral Irradiance at Air Mass 1.5: Direct Normal and Hemispherical for a 37° Tilted Surface.
12. Near room temperature, a-Si:H has a "quantum efficiency" of essentially 1.00 for generating photocarriers when a photon is absorbed. Carasco F, Spear W, *Philos. Mag. B* **47**, 495 (1983). This ideal value is rather surprising. Many other non-crystalline materials have "geminate recombination" of the electron and hole immediately after their generation, which would of course lead to a loss of conversion efficiency; see ref. 13.
13. Schiff E, *J. Non-Cryst. Solids* **190**, 1 (1995).
14. Guha S, in Street R, Ed, *Technology and Applications of Amorphous Silicon*, 252–305, Springer, Berlin (1999). Figure 6.10 of this paper is a valuable compilation of power measurements for varying cell thicknesses and light-soaking histories.
15. Guha S, Yang J, Banerjee A, Glatfelter T, Hoffman K, Xu X, *Technical Digest – 7th International Photovoltaic Science and Engineering Conference (PVSEC-7)*, 43 (Nagoya, Japan, 1993).
16. Staebler D, Wronski C, *Appl. Phys. Lett.* **31**, 292 (1977).
17. Shugar D, *Proc. 24th Photovoltaic Specialists Conference*, 670, IEEE (1994).
18. Measurements furnished through the courtesy of N. Cereghetti, Laboratory of Energy, Ecology and Economy (LEEE), Scuola Universitaria Professionale della Svizzera Italiana. These data apply to the 0.5 kW array, and are described in more detail by Cereghetti N, Chianese D, Rezzonico S, Travaglini G, *Proceedings of the 16th European Photovoltaic Solar Energy Conference*, James & James, London (2001).
19. Emery K, Burdick J, Calyem Y, Dunlavy D, Field H, Kroposki B, Moriary T, Ottoson L, Rummel S, Strand T, Wanlass M, *Proc. 25th Photovoltaic Specialists Conference*, 1275, IEEE (1996).
20. Kameda M, Sakai S, Isomura M, Sayama K, Hishikawa Y, Matsumi S, Haku H, Wakisaka K, Tanaka K, Kiyama S, Tsuda S, Nakano S, *Proc. 25th Photovoltaic Specialists Conference*, 1049, IEEE (1996).
21. del Cueto J, von Roedern B, *Prog. Photovoltaics* **7**, 101 (1999).
22. Carlson D, Lin G, Ganguly G, *Proc. 28th Photovoltaic Specialists Conference*, 707, IEEE (2000).
23. Street R, *Hydrogenated Amorphous Silicon*, Cambridge University Press, Cambridge (1991).
24. Phillips J, *J. Non-Cryst. Solids* **34**, 153 (1979).
25. Boolchand P, Thorpe M, *Phys. Rev. B* **50**, 10366 (1994).