



**Figure 17.32** The International Space Station

## 17.3 COMPONENTS FOR PV SYSTEMS

As has been seen in Section 17.2.2.8, the so-called balance of systems play a key role in the lifetime costs of photovoltaic systems. Therefore, the main components will be described as a summary; for more details, see the respective chapters in this book.

### 17.3.1 Battery Storage

Stand-alone PV systems require energy storage to compensate for periods without or within sufficient solar irradiation, such as during the night or during cloudy weather. In all cases in which electric energy storage is required, the classical electrochemical accumulator battery is the most convenient form of energy storage for a PV system, especially since its DC (direct current) characteristic allows for direct connection between