

H01M14/00, H01L27/14, F24J2/00, H01L31/00, H01L31/02, and H01L31/12. This time period the number of patents is less, so there is no strong correlation between the various technical fields. The behavior of the application cluster around one of the main areas of technology has not yet appeared. Technology development prospects are uncertain.

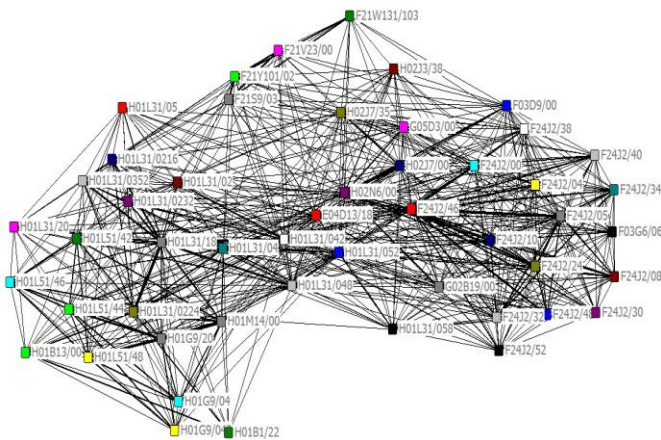


Fig. 5 The IPC correlation diagrams for solar energy patent applications from 2006 to 2012

From 2006 to 2012, the field of solar energy technology associated behavior occurred significant changes, as shown in Fig. 5. There is a strong correlation between H01L31/18 (Processes or apparatus specially adapted for the manufacture or treatment of these devices or of parts thereof), H01L31/042 (including a panel or array of photoelectric cells, e.g. solar cells), H01L31/048 (encapsulated or with housing) and H01L31/0224 (Electrodes). Overall, H01L31/18, H01L31/042, H01L31/048 and H01L31/0224 were the center of solar energy technology field, surrounded by numerous technical fields. This shows that solar energy technology is relatively mature.

III. Conclusions

The solar energy patent applications have been evaluated by using the China Patent Abstract Database. Solar energy technology patents are analyzed deeply from the total amount of patent applications, technology sub-class, and association analysis, respectively. From 1985 to 2005, the number of patents and the number of patent applicants is in a relatively low number. Since 2006, patent activity with respect to solar energy technologies has begun gathering speed and has experienced a continuous increase until the present, with a peak in the number of applications reached in 2011. The top technology field (represented by IPC class) was H01L31/18 (Processes or apparatus specially adapted for the manufacture or treatment thereof or of parts thereof). The correlation

diagrams show that H01L31/18, H01L31/042, H01L 31/048 and H01L31/0224 were the center of solar energy technology field, surrounded by numerous technical fields. Nowadays, the solar energy technology is relatively mature.

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