Understanding the frequent language differences in current abstracts written by native English scientists and Chinese scientists is necessary to improve the writing quality of postgraduate English writing courses. This study mainly analyzes abstracts in journal articles/theses. Sample abstracts are selected from 20 different fields. For each field two English abstracts by native speakers, (Ea), and two of similar theme or topic translated from Chinese to English were chosen (Ta), along with the original Chinese abstracts (Ca). Each abstract is divided into four parts following the Bhatia’s model using different colors, identifying the linguistic characteristics of the nature of each part. Statistical analysis is performed using SPSS, and frequencies are calculated and used to generate bar charts and pie charts . The verb tense, passive voice, modal verbs, first person pronoun and length of section are studied by the contrastive analysis between Ta and Ea. For the comparison between Ca and Ta, the translation of scientific terms, numeric figures and units, and the syntactic divisions are discussed. The results show differences and similarities in moves, tenses and voices between Ta and Ca, indicating that it is necessary for Chinese writers to have a deeper insight into the nuances of English writing and their role, and to understand the structural differences between the two styles in academic writing. Well-prepared course materials should be developed to improve the English writing skills of the target learners. It will also be helpful for them to have a deeper insight into the subtle meaning that the English texts reveal.