开头句  
      In this paper we describe......  
      This paper presents......  
      This paper reports/experiments aimed at......  
      The author reports......  
      This study reports......  
      Investigations on ... were carried out.  
      The authors made observations on ...  
      Our project aims to study/survey/evaluate/determine

其基本要素包括研究目的,方法,结果和结论

摘要的四要素  
  
目的、方法、结果和结论称为摘要的四要素。  
  
（1）目的：指出研究的范围、目的、重要性、任务和前提条件，不是主题的简单重复。  
（2）方法：简述课题的工作流程，研究了哪些主要内容，在这个过程中都做了哪些工作，包括对象、原理、条件、程序、手段等。  
（3）结果：陈述研究之后重要的新发现、新成果及价值，包括通过调研、实验、观察取得的数据和结果，并剖析其不理想的局限部分。  
（4）结论：通过对这个课题的研究所得出的重要结论，包括从中取得证实的正确观点，进行分析研究，比较预测其在实际生活中运用的意义，理论与实际相结合的价值。

\chapter\*{Abstract}

\label{cha:kurzfassung}

Coupling fibers to photonic waveguides leads to normally heavy energy loss at optical transmissions. This work aims to discuss the coupling interface between tapered and lensed fibers and photonic waveguides and promote the coupling ability. For this purpose we carried out the analysis by numerical simulations with the help of CST MWS (CST Microwave Studio\textregistered) and Matlab programs. \\

For this discussion we arranged the simulations on following considerations, displacing the waveguide, changing material composing of the waveguide and reforming the waveguide structure. For displacement of the waveguide we shifted the waveguide in a small range along x, y and z axis respectively. For material composing we executed simulations in specified surrounding conditions or by changing the waveguide materials. For reform of the waveguide structure the taper technique and the lens technique were involved in waveguide structures. \\

Through the comparison of simulation results we can conclude that changing waveguide material and the use of tapered or lensed waveguides leads to an enhancement of transmission efficiency.