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Nanotechnologies — Characterization of single-wall carbon nanotubes using near infrared photoluminescence spectroscopy

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Foreword

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Introduction

Discovery of band gap photoluminescence (PL) of single-wall carbon nanotubes (SWCNTs) has provided a new way to characterize their unique electronic properties induced by their low dimensionality. The method can provide the chiral indices of the semi-conducting SWCNTs in a sample and their relative integrated PL intensities. With the knowledge of their PL cross-sections, the relative mass concentrations of semi-conducting SWCNTs in a sample can be estimated.

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