



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

Mail Stop 3030

August 24, 2009

Gary Gatchell  
Chief Financial Officer  
Ascent Solar Technologies, Inc.  
8120 Shaffer Parkway  
Littleton, Colorado 80127

**Re: Ascent Solar Technologies, Inc.**  
**Form 10-K for the fiscal year ended December 31, 2008**  
**Filed March 12, 2009**  
**File No. 001-32919**

Dear Mr. Gatchell:

We have completed our review of your Form 10-K and related filings and do not, at this time, have any further comments.

Sincerely,

Brian R. Cascio  
Accounting Branch Chief