



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 3030

August 31, 2017

Christian F. Kramer  
President and Chief Executive Officer  
Intermolecular, Inc.  
3011 N. First Street  
San Jose, California 95134

**Re: Intermolecular, Inc.  
Form 10-K for the fiscal year ended December 31, 2016  
Filed March 3, 2017  
File No. 001-35348**

Dear Mr. Kramer:

We have completed our review of your filings. We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Sincerely,

/s/ Amanda Ravitz

Amanda Ravitz  
Assistant Director  
Office of Electronics and Machinery

cc: Patrick A. Pohlen, Esq.  
Latham & Watkins LLP