

INTERMOLECULAR INC
Form SC 13G/A
February 25, 2014

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No. 1)*

INTERMOLECULAR, INC.
(Name of Issuer)

COMMON STOCK, \$.001 PAR VALUE PER SHARE
(Title of Class of Securities)

45882D 109
(CUSIP Number)

December 31, 2013
(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP No. 45882D 109

1. Names of Reporting Persons.

ATMI, Inc.

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

(b)

3. SEC Use Only

4. Citizenship or Place of Organization Delaware, United States

Number of Shares Beneficially by Owned by Each Reporting Person With:	5. Sole Voting Power 0
	6. Shared Voting Power 2,592,342
	7. Sole Dispositive Power 0
	8. Shared Dispositive Power 2,592,342

9. Aggregate Amount Beneficially Owned by Each Reporting Person 2,592,342

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions). ..

11. Percent of Class Represented by Amount in Row (9) 5.6%*

12. Type of Reporting Person (See Instructions) CO

* Based on 46,105,067 shares of common stock outstanding as disclosed in the Issuer's quarterly report on Form 10-Q/A filed with the Securities and Exchange Commission on December 13, 2013.

CUSIP No. 45882D
109

1. Names of Reporting Persons.

Advanced Technology Materials, Inc.

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)
 (b)

3. SEC Use Only

4. Citizenship or Place of Organization Delaware, United States

Number of Shares Beneficially by Owned by Each Reporting Person With:	5. Sole Voting Power 0
	6. Shared Voting Power 2,592,342
	7. Sole Dispositive Power 0
	8. Shared Dispositive Power 2,592,342

9. Aggregate Amount Beneficially Owned by Each Reporting Person 2,592,342

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions). ..

11. Percent of Class Represented by Amount in Row (9) 5.6%*

12. Type of Reporting Person (See Instructions) CO

* Based on 46,105,067 shares of common stock outstanding as disclosed in the Issuer's quarterly report on Form 10-Q/A filed with the Securities and Exchange Commission on December 13, 2013.

Item 1.

(a) Name of Issuer

Intermolecular, Inc.

(b) Address of Issuer's Principal Executive Offices

3011 N. First Street
San Jose, CA 95134

Item 2.

(a) Name of Person Filing

This Schedule 13G Amendment No. 1 is being filed by ATMI, Inc., a Delaware corporation ("ATMI") and its wholly owned subsidiary Advanced Technology Materials, Inc., a Delaware corporation ("Advanced").

(b) Address of Principal Business Office or, if none, Residence

The address for each of the Reporting Persons is:
7 Commerce Drive
Danbury, CT 06810

(c) Citizenship

ATMI and Advanced are Delaware corporations.

(d) Title of Class of Securities

common stock, \$.001 par value per share

(e) CUSIP Number

45882D 109

Item 3. If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

- (a) .. Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o);
- (b) .. Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c);
- (c) .. Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c);
- (d) .. Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8);
- (e) .. An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);

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- (f) .. An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
- (g) .. A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G);
- (h) .. A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i) .. A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j) .. A non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J).

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(k) " Group, in accordance with §240.13d-1(b)(1)(ii)(K).

If filing as a non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J), please specify the type of institution:

_____.

Item 4. Ownership.

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

(a) Amount beneficially owned: 2,592,342 shares of common stock

(b) Percent of class: 5.6%

(c) Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote: 0

(ii) Shared power to vote or to direct the vote: ATMI may be deemed to have shared voting power with respect to the 2,592,342 shares of common stock directly held by Advanced.

(iii) Sole power to dispose or to direct the disposition of: 0

(iv) Shared power to dispose or to direct the disposition of: ATMI may be deemed to have shared dispositive power with respect to the 2,592,342 shares of common stock directly held by Advanced.

Item 5. Ownership of Five Percent or Less of a Class

Not applicable.

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

Not applicable.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person

Not applicable.

Item 8. Identification and Classification of Members of the Group

Not applicable.

Item 9. Notice of Dissolution of Group

Not applicable.

Item 10. Certifications

Not applicable.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: February 24, 2014

ATMI, INC.

By: /s/ Timothy C. Carlson
Name: Timothy C. Carlson
Title: Executive Vice President & CFO

ADVANCED TECHNOLOGY MATERIALS, INC.

By: /s/ Timothy C. Carlson
Name: Timothy C. Carlson
Title: Executive Vice President & CFO

EXHIBIT A
JOINT FILING AGREEMENT

The undersigned hereby agree that the statement on Schedule 13G Amendment No. 1 with respect to the common stock of Intermolecular, Inc. dated as of February 24, 2014 is, and any further amendments thereto signed by each of the undersigned shall be, filed on behalf of each of the undersigned pursuant to and in accordance with the provisions of Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended.

Dated: February 24, 2014

ATMI, Inc.

By: /s/ Timothy C. Carlson
Name: Timothy C. Carlson
Title: Executive Vice President
& CFO

ADVANCED TECHNOLOGY MATERIALS,
INC.

By: /s/ Timothy C. Carlson
Name: Timothy C. Carlson
Title: Executive Vice President
& CFO