

Behnke John R.  
Form 3  
November 17, 2011

**FORM 3 UNITED STATES SECURITIES AND EXCHANGE COMMISSION**  
**Washington, D.C. 20549**

OMB APPROVAL

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**INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934,  
Section 17(a) of the Public Utility Holding Company Act of 1935 or Section  
30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *		2. Date of Event Requiring Statement	3. Issuer Name <b>and</b> Ticker or Trading Symbol	
Â Behnke John R.		(Month/Day/Year)	INTERMOLECULAR INC [IMI]	
(Last)	(First)	(Middle)	11/17/2011	
INTERMOLECULAR, INC.,Â 3011 NORTH FIRST STREET			4. Relationship of Reporting Person(s) to Issuer	5. If Amendment, Date Original Filed(Month/Day/Year)
(Street)				(Check all applicable)
SAN JOSE,Â CAÂ 95134-2004			<input type="checkbox"/> Director <input type="checkbox"/> 10% Owner	6. Individual or Joint/Group Filing(Check Applicable Line)
(City)	(State)	(Zip)	<input checked="" type="checkbox"/> Officer <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Form filed by One Reporting Person
			(give title below) (specify below)	<input type="checkbox"/> Form filed by More than One Reporting Person
			SVP & GM Semi Group	

**Table I - Non-Derivative Securities Beneficially Owned**

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
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Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

SEC 1473 (7-02)

**Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.**

**Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)	3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)	4. Conversion or Exercise Price of Derivative Security	5. Ownership Form of Derivative Security: Direct (D)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable      Expiration Date	Title      Amount or Number of			

				Shares		or Indirect (I) (Instr. 5)	
Stock Option (right to buy)	Â (1)	10/21/2019	Common Stock	250,000	\$ 2	D	Â
Stock Option (right to buy)	Â (2)	03/30/2021	Common Stock	30,000	\$ 6.2	D	Â

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Behnke John R. INTERMOLECULAR, INC. 3011 NORTH FIRST STREET SAN JOSE, CA 95134-2004	Â	Â	Â SVP & GM Semi Group	Â

## Signatures

/s/ John R. Behnke 11/17/2011

\*\*Signature of  
Reporting Person

Date

## Explanation of Responses:

\* If the form is filed by more than one reporting person, *see* Instruction 5(b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) The shares vest pursuant to the following schedule: Twenty-Five Percent (25%) of the shares subject to the option vest on the first anniversary measured from October 5, 2009 (the "Vesting Commencement Date") and the remaining shares subject to the option vest in 36 successive, equal monthly installments thereafter on each monthly anniversary of the Vesting Commencement Date, subject to the Reporting Person's continued employment or service relationship with the Issuer on each such vesting date.

(2) The shares vest pursuant to the following schedule: Twenty-Five Percent (25%) of the shares subject to the option vest on the first anniversary measured from February 2, 2011 (the "Vesting Commencement Date") and the remaining shares subject to the option vest in 36 successive, equal monthly installments thereafter on each monthly anniversary of the Vesting Commencement Date, subject to the Reporting Person's continued employment or service relationship with the Issuer on each such vesting date.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *See* Instruction 6 for procedure.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.