

MÜHENDİSLİK FAKÜLTESİ



KİMYA MÜHENDİSLİĞİ

KMB208 - Anorganik Kimya

Prof. Dr. Yıldırım TOPCU

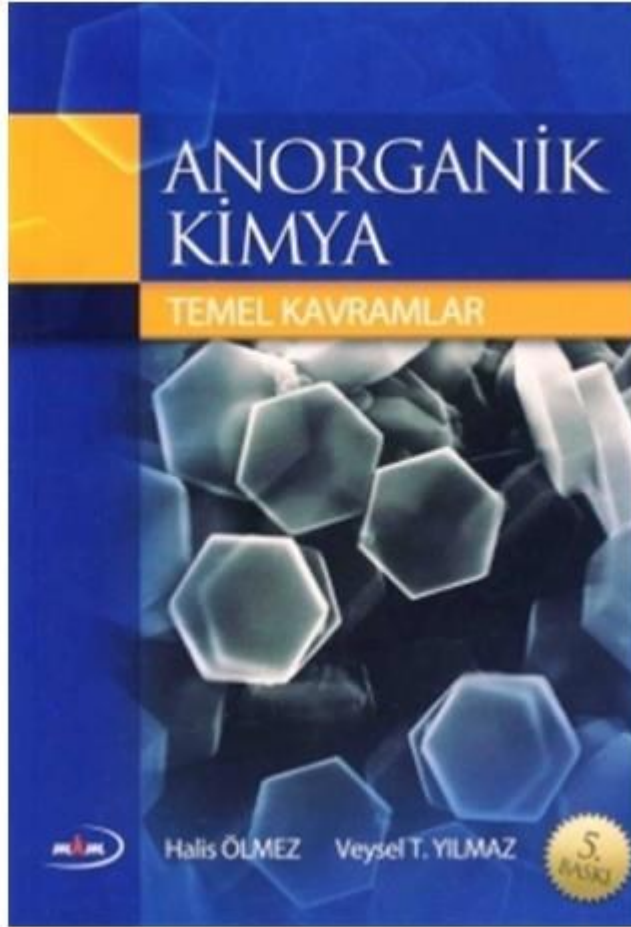
Kimyasal Baęa Giriř (İyonik Baę, Kovalent Baę, Koordine Baę, Metalik Baę)

KMB208 - Anorganik Kimya

Hafta - 5



DERS İÇİN KAYNAK KİTAP



Sunuda verilen tüm tablo, şekil vb. içerik dersin kaynak kitabından alınmış olup, ders kaynak kitap üzerinden takip edilecektir.

Sunudan yapılacak alıntılarda ders kitabının kaynak gösterilmesi gerekmektedir.

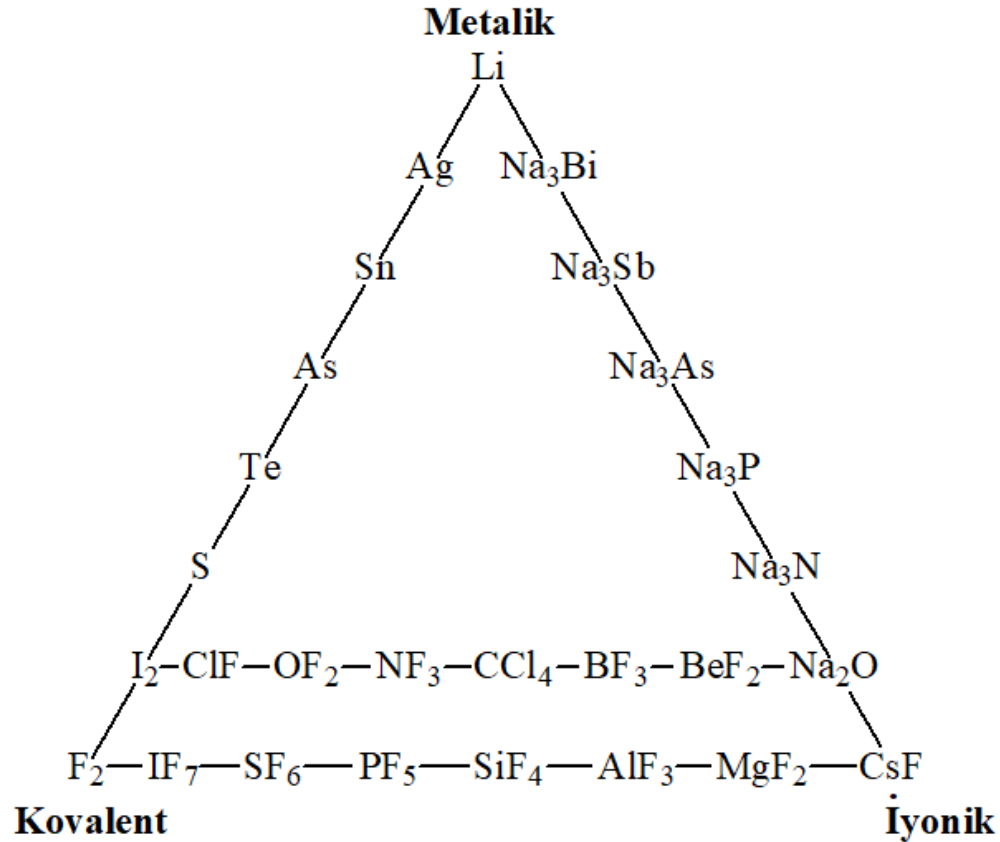


KİMYASAL BAĞA GİRİŞ

- Kararlı Yapıya Ulaşma
- Bağ Türleri
- İyonik Bağ
- Kovalent Bağ
- Çok katlı bağlar
- Koordine bağ
- Yükseltgenme Basamağı
- Formal Yük
- Lewis Formülleri
- Rezonans
- Metalik Bağ

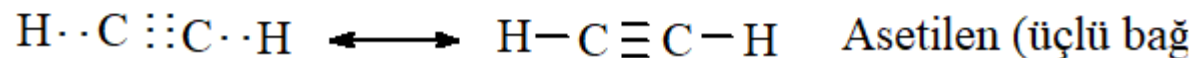
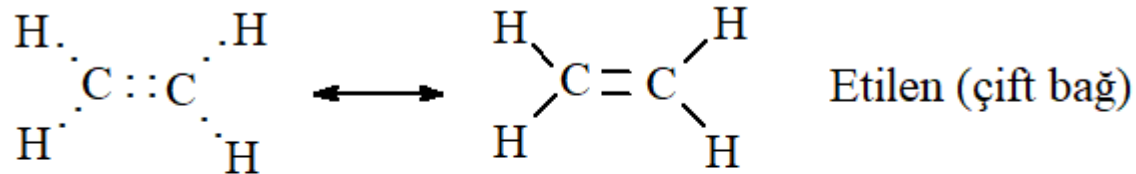
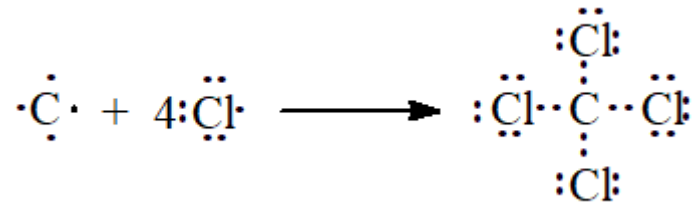
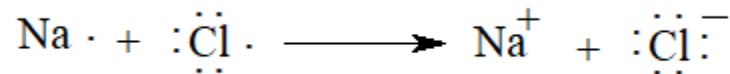
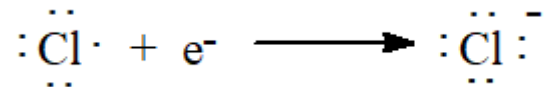


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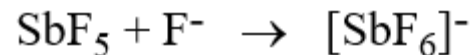
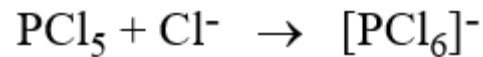
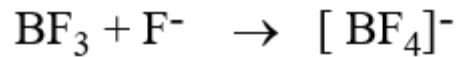
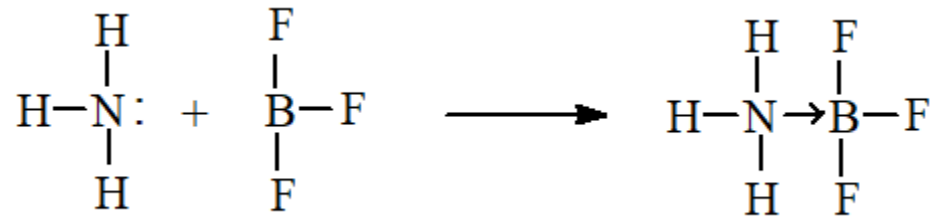
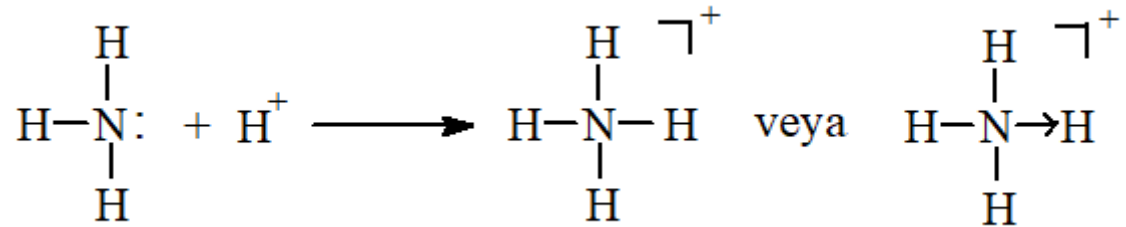


Şekil 3. 1. İyonik, kovalent ve metalik bağ arası geçişler

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Tablo 3. 1. Yaygın yükseltgenme basamakları (iyon türleri) ve elektron yapıları

I A					III A	IV A	V A	VI A	VII A	
H ⁺	II A						N ³⁻	O ²⁻	F ⁻	
Li ⁺	Be ²⁺									
Na ⁺	Mg ²⁺	III B	I B	II B	Al ³⁺		P ³⁻	S ²⁻	Cl ⁻	
K ⁺	Ca ²⁺	Sc ³⁺	Cu ⁺	Zn ²⁺	Ga ³⁺	Ga ⁺	Ge ²⁺	As ³⁺	Se ²⁻	Br ⁻
Rb ⁺	Sr ²⁺	Y ³⁺	Ag ⁺	Cd ²⁺	In ³⁺	In ⁺	Sn ²⁺	Sb ³⁺	Te ²⁻	I ⁻
Cs ⁺	Ba ²⁺	La ³⁺	Au ⁺	Hg ²⁺	Tl ³⁺	Tl ⁺	Pb ²⁺	Bi ³⁺		

H⁻, Li⁺, Be²⁺ ns² diğerleri ns² np⁶

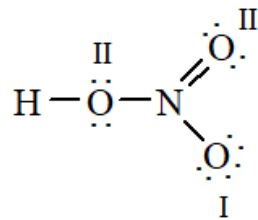
ns² np⁶ nd¹⁰

ns² np⁶ nd¹⁰ (n + 1) s²



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HNO₃ molekülünde atomların formal yüklerini bulunuz.



$$\text{N: } 5-4 = +1$$

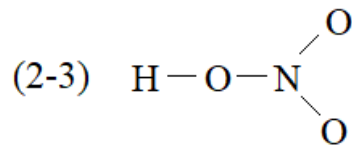
$$\text{H: } 1-1 = 0$$

$$\text{O}_\text{I: } 6-7 = -1$$

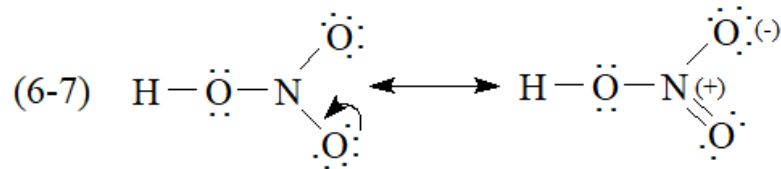
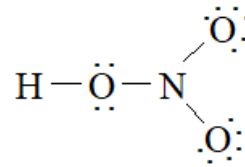
$$\text{O}_\text{II: } 6-6 = 0$$



(1) $1 + 5 + (3 \times 6) = 24 \text{ e}^-$



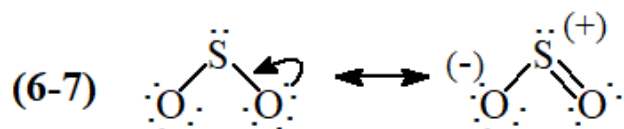
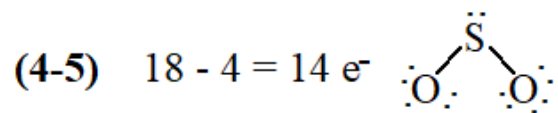
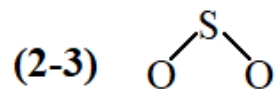
(4-5) $24-8 = 16\text{e}^-$

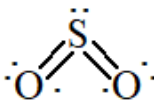


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b) SO₂

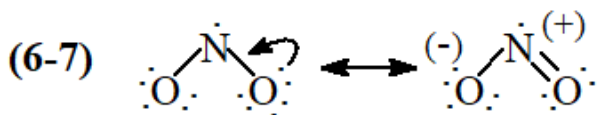
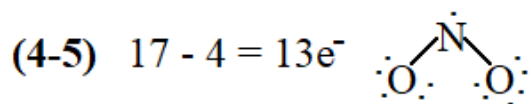
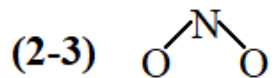
(1) $6 + (2 \times 6) = 18e^-$



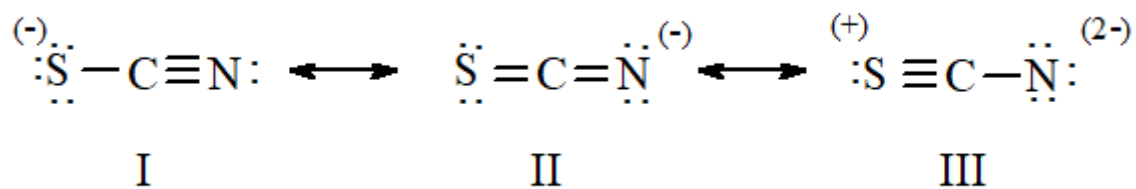
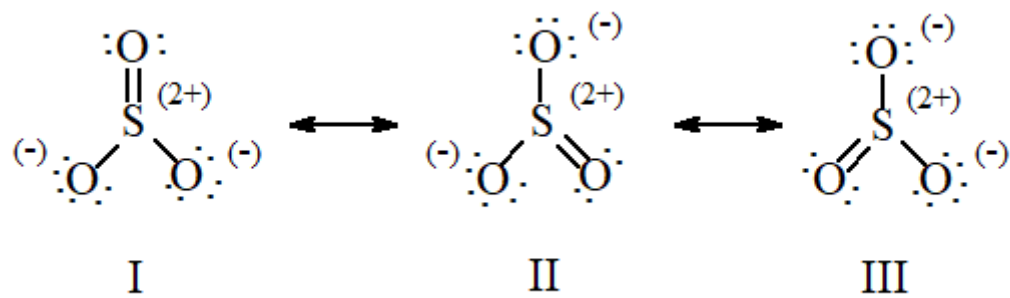
(8) S, üçüncü periyot elementi olduğundan  bulunur.

c) NO₂

(1) $5 + (2 \times 6) = 17e^-$



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Kaynaklar

- Anorganik Kimya – Temel Kavramlar, Prof. Dr. Halis ÖLMEZ, Prof. Dr. Veysel T. YILMAZ, Marmara Kitabevi Yayınları, 2010.

