

# Uglerod guruhchasiga umumiy tavsifnoma

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# IV guruhning asosiy guruhchasi elementlarini taqqosiy tavsifnomasi

Element	Ar	Valent elektronlari	Atom radiusi	Metal- maslik xossasi	Oksidlov- chilik xossasi	Birikmalari tavsifi
C	12	$2s^2 2p^2$	))	↓ k a m a y a d i	↓ k a m a y a d i	$CO_2, H_2CO_3$ Kislotslik xossasi
Si	28	$3s^2 3p^2$	)))			$SiO_2, H_2SiO_3$ Kislotalik xossasi
Ge	73	$4s^2 4p^2$	))))			$GeO_2, Ge(OH)_4$ amfoterlik xossasi
Sn	119	$5s^2 5p^2$	))))))			$SnO_2, Sn(OH)_4$ Amfoterlik xossasi
Pb	207	$6s^2 6p^2$	))))))			$PbO_2, Pb(OH)_4$ Amfoterlik xossasi

# Uglerod tabiatda



Kal'tsit



Ohak tosh



Bo'r



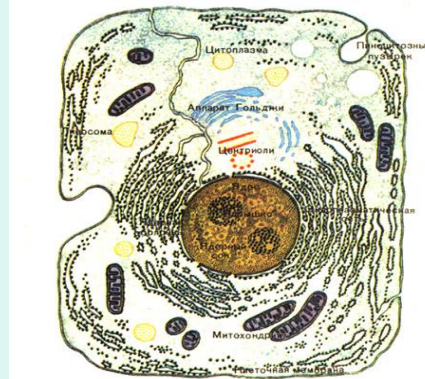
marmar



malaxit



magnezit



Tirik organizmlar

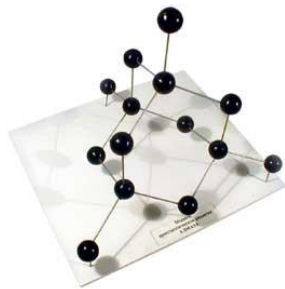


Neft, tabiiy gaz,  
Tosh ko'mir

# Oddiy modda - uglerod

# OImos

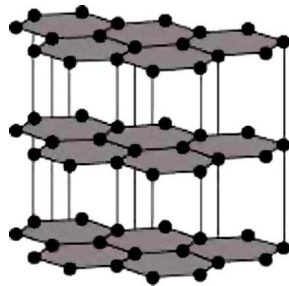
**Atom kristal  
panjaraga ega  
Qattiq  
tiniq  
Elektr tokini o'tkazmaydi**



# Oddiy modda - uglerod

# Grafit

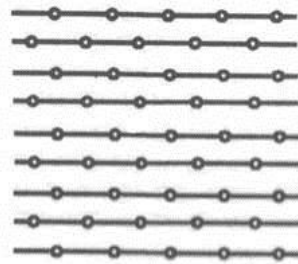
**Ato kristal  
panjaraga ega  
To'q kul rang  
Metallik yaltirig'iga ega  
Yarm o'tkazgich**



Oddiy modda - uglerod

# Karbin

**Amorf  
uglerod  
Qora rangli kukun  
Yrim o'tkazgich**



# Oddiy modda - uglerod

Ko'mir - maydalangan grafit  
(qo'shimchalar bilan)



# Uglerodning kimyoviy xossalari

Qaytaruvchi (ok.daraj. +2, +4)	Oksidlovchi (ok.daraj. -4)
<p>Metalmaslar bilan</p> $\text{C} + \text{O}_2 \rightarrow \text{CO}_2$ $2\text{C} + \text{O}_2 \rightarrow 2\text{CO}$ <p>Metallarni qaytaradi</p> $\text{C} + \text{CuO} \rightarrow \text{CO} + \text{Cu}$	<p>Metallar va vodorod bilan</p> $3\text{C} + 4\text{Al} \rightarrow \text{Al}_4\text{C}_3 \text{ (karbidlar)}$ $\text{C} + 2\text{H}_2 \rightarrow \text{CH}_4$

**2 mol ugleroddan qanday hajmdagi metanni hosil qilish mumkin?**



# Bilimimizni tekshiramiz

**1** Qaysi modda uglerodning allotropik shakl o'zgarishiga kirmaydi

olmos

grafit

Ko'mir

karbin

**2** Uglerodni metallar bilan o'zaro ta'sirlashishi natijasida qanday modda hosil bo'ladi:

karbidlar

karbonatlar

oksidlar

karbidlar

**3** Uglerod oksidlovchi sifatida qaysi modda bilan reaksiyaga

Kislorod bilan

kirish

Metal oksidlari bilan

Oltinugut bilan

Vodorod bilan

**4** Uglerod uchun qanday oksidlanish darajasi tavsifli:

+2,+4,-4

+3,+5,-3

+4,+6,-2

+5,+7,-1

# Uyga vazifa

§

# Foydalanilgan resurslar

- <http://images.yandex.ru/>
- <http://rutube.ru/tracks/784046.html?v=864ec8d80dcad3fee0a28db5db3eeb66>